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ORIGINAL ARTICLES.

THE ABUSE AND DANGERS OF COCAIN.[1]

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WHEN cocain was first brought to the attention of the medical world it was heralded as an unalloyed blessing to mankind, and one which would revolutionize surgical methods. In some respects this expectation has been realized. The extraordinary effects of cocain in surgery, especially in the minor branch, have surpassed even the most sanguine hopes, and its application has become such a routine practice that we but little realize that fifteen years ago this drug was practically unknown. In many cases in which a general anesthetic and its attending danger would not be admissible, and in which the patient is unwilling or unable to tolerate the physical pain of a minor operation, this useful alkaloid allows the necessary surgical procedure to be carried out without pain or inconvenience, although not without a certain element of danger, as was claimed by those who first employed it.

In no part of medicine has cocain been of more service than in the treatment of diseases of the upper respiratory passages. This is in a great sense due to its ease of application, as the mucous membrane absorbs the various solutions of this drug easily, an absorbability which is less in the throat than in the nose but in each location sufficient to obviate the necessity of a submucous injection. Not the least value of cocain in the nasal passages is the contractile effects on the erectile tissues, which enables the operator to inspect the field more thoroughly, whether for examination or for the necessary manipulation for operative procedures. Many pathologic conditions no doubt would escape observation but for this useful effect of cocain.

While admitting, then, that cocain has proved a great benefit to medicine and surgery, and that it has contributed not only to the comfort of the patient but also to the success of the physician by enabling him to operate more easily and thoroughly, it cannot, however, be said to be an unalloyed blessing. In fact, so fully have surgeons realized the evil effects which the indiscriminate use of cocain has caused that many believe it has been productive of more harm than good. This was recently illustrated by the remarks of some of the speakers who expressed this opinion in a discussion before the American Laryngological, Rhinological and Otological Society at its meeting at Washington during May, 1897. As these men have had unusual opportunities for noting the good and evil effects of cocain, their opinion is certainly entitled to much consideration.

That the danger of the toxic effects of this alkaloid is not fully understood is demonstrated by the fact that in the large majority of cases in which the effects are serious or even fatal no drug to counteract its toxic effects has been at hand. These toxic effects are by no means rare, as is demonstrated by a study of the literature of this subject, and when it is realized that by far the greater number of fatal cases do not find their way into medical literature it can be more fully understood that the application of cocain is not without its attending danger. The knowledge of this should cause one to make the same preparations in administering cocain as when a general anesthetic is used, as the difference of danger is but relative. The agents for this purpose which will be found most useful are nitrite of amyl, nitroglycerin, atropin, whisky, ammonia, and digitalis. The most rapid method of relief, and one most easily applied, is the horizontal position, and this should be resorted to at the first appearance of toxic symptoms.

The toxic effects vary according to the amount of cocain used and the susceptibility or idiosyncrasy of the patient, the latter, as in the case of morphin, being the most serious consideration in the application of this drug, as it sometimes develops in patients in whom it is least expected. In all these cases the element of fear should be considered, with its depressing effects upon the heart and circulation, thus predisposing the patient to the toxic effects. The application of cocain should, therefore, be tentative, this applying especially to hypodermatic injections in which the action of the drug cannot be controlled when once it has left the syringe. On this account, also, cocain should never be used in the nasal passages in the form of a spray; it should be applied by means of a small pledget of cotton so that the administration can be discontinued at the appearance of the first toxic symptoms.

Among the symptoms due to cocain poisoning are extreme pallor, profuse perspiration, unconsciousness; frequent, feeble, irregular and intermittent

[1] Read before the Orleans Parish Medical Society, May, 1898.

pulse; dizziness, nausea, in some cases great agitation, and occasionally loquacity; more rarely, blindness, deafness, lividity, muscular rigidity, a feeling of impending death, convulsive twitchings, paralysis, and convulsive or suspended respiration. The earliest symptoms should be carefully noted and counteracting measures at once instituted. When the symptoms are sufficiently urgent the administration of medicines by the stomach should not be relied upon, but the more rapid and efficacious method of hypodermatic injections at once resorted to. The majority of symptoms disappear quickly or within a few hours after the application of the cocain, but they are sometimes prolonged for several days. Among the latter may be noted obstinate headache, insomnia, hallucinations, numbness of the extremities, and prostration.

The writers who have recorded the evil effects of cocain in their practice are sufficiently large in number, although probably small in proportion to those who have not reported their unfavorable cases. Among those may be mentioned Ricke,[1] Maurice Schmidt,[2] Paul Heymann,[3] B. Pitts,[4] D. Mowat,[5] Moizard,[6] Booth,[7] A. W. Addinsell,[8] Szuman,[9] and S. Mitchell.[10] A case of chronic convulsions which lasted three hours in a ten-year-old child is reported by Jacoby,[11] and in one case reported by Haenel[12] the epileptiform convulsions lasted for five hours.

The literature of cocain anesthesia demonstrates the fact that death has occurred from its administration in many instances. Whether this fatal result is due to the amount of cocain administered, to a peculiar idiosyncrasy of the patient, to omission of proper antidotal or restorative measures, or to the lack of their prompt application, is naturally difficult to determine. Many cases, probably, are due to a combination of these causes. In a case reported by Abadie[13] death followed an injection of a 5-per-cent. solution of cocain for an operation on the eyelid. There was loss of consciousness within ten minutes, the respiration stopped, and the face became cyanosed as if from asphyxia. There was partial resuscitation after great effort, but death followed the same evening.

The urethral injection of cocain has been a fruitful source of fatal results. In a case reported by Simes[14] the patient was a man aged twenty-nine years in whom a 20-per-cent. solution of cocain was introduced into the urethra by means of a long-nozzled syringe which passed about four inches into the canal, the object being to perform an internal urethrotomy. Toxic symptoms at once developed, the muscles of the face twitching, the eyes staring, pupils dilated, frothing at the mouth, face much congested, respiration labored, and finally epileptiform convulsions. The respiratory function was labored, the action of the heart became irregular and slow, and the entire surface of the body cyanosed. Death occurred twenty minutes after the first convulsion. At the autopsy the brain and lungs were found congested, the right side of the heart was empty, and the left filled with clots of blood. In this case the susceptibility of the patient was obviously aggravated by the large dose injected into the rapidly absorbing mucous membrane. An unrecorded case of a fatal issue from the injection of cocain into the urethral canal occurred in this city about three years ago. Of five cases of cocain poisoning reported by R. W. Haynes of Los Angeles, Cal.,[15] two had a fatal issue. One of the latter cases was due to the injection of a solution of cocain into the urethra of a child to facilitate the passage of a sound. In an article on cocain poisoning by J. B. Mattison[16] four fatal cases of recent date are referred to, all following the use of a 4-per-cent. solution of the drug. Two of these were also urethral cases, the dose in one being 1 grain, and in the other ½ of a grain. In the third case a 4-per-cent. solution was applied to a blistered surface, and in the fourth, a rectal case, ⅔ of a grain in two doses, with an interval of ten minutes, was used. In the third case the symptoms were excitement, convulsions, and death, all within one minute.

Rhinolaryngologic literature has not furnished its quota of the reports of fatal issues from the use of cocain. Whether this is due to modesty or to the fact that the application of the drug in the upper respiratory passages may be more accurately controlled, it is difficult to state. The enormous extent to which cocain has been used, and the fact that fatal issues from other causes have been reported as faithfully in this branch of medicine, would favor the latter explanation of the lack of mortality from cocain in this region. Dentistry has not been so well favored in this respect, this being due to the fact that the gingival membrane has only a limited power of absorption, and the anesthetic effect of cocain is usually obtained by the injection of the drug. A fatal case is reported in the *Zeitschrift f. Zahnheilkunde*, Berlin, September 25, 1890. The patient, a woman aged twenty-nine years, was apparently healthy but quite nervous. The extraction of a tooth was painless and nothing abnormal was noted. The operator withdrew from the chair to obtain some water for the patient and on his return found her motionless. Physicians were summoned and artificial respiration practised, but without success. The quantity of cocain injected was ⅓ of a grain. A useful moral in this case is that, if the dentist is not capable of treating a case of cocain

poisoning he should not administer the drug except in the presence of a competent physician.

In one case reported by R. W. Haynes,[16] death occurred from the injection of a solution of 4 grains of the drug into the gums for the extraction of a tooth. In addition to these fatal results, the records of dentistry show many cases in which the toxic effects of cocain have been exhibited without, however, being followed by a fatal result. Grassmann,[17] reports a case which is remarkable for the fact that the solution was not injected but simply applied to the gums, the effects developing after five minutes, when no more than ¾ of a grain had been absorbed. L. H. Broughton[18] reports a case in which 3 minims of a 20-per-cent. solution were placed in the cavity of a tooth, the application being followed by irregular and slow respiration, retarded pulse, and total unconsciousness. The patient recovered under the use of strychnin, which the author believes to be antidotal for cocain poisoning. In a case reported by Von Isoo[19] 1¼ grains were injected into the gums of a man of strong physique. The toxic symptoms which developed were of a severe character, palpitation, vertigo, and syncope, the effects not disappearing for several days. George Bock[20] reports a case of unconsciousness, blindness, and other toxic symptoms which followed the submucous injection of cocain into the gums.

Experiments on animals have shown that, in acute poisoning, the mode of death is that of asphyxiation, this being corroborated both by observation of the animals during life and by *post-mortem* examination of the bodies. An interesting observation shown by these investigations [21] is the effect of cocain upon the bodily temperature. The majority of experimenters who have tried this drug find that when injected intravenously into the jugular vein of dogs it produces a marked rise of the bodily heat. Langlois and Richet[22] also found that the variation of this bodily temperature by artificial means specially influences the power of the drug over the nervous system, and that animals whose temperature is raised by a warm bath before the dose is given rapidly become convulsed and die, the increased temperature of the body by the drug over and above that already produced artificially aiding in the production of a fatal issue. They have noted that cooling of the body prevents such a termination. These authors[23] have also shown that the convulsions following the injection of cocain into the animal economy are identical with those of cortical epilepsy, and claim that it is in all probability true, as a result of the discovery, that stimulation of the motor region of the cortex produces more marked effects than ordinarily occur under such circumstances.

While a close investigation of otolaryngologic literature has failed to furnish me with an instance of a fatal issue from the use of cocain, reports of the toxic symptoms are by no means rare, and, judging from the extensive—I had almost said reckless—manner in which this drug has been used this occurrence must have been by no means infrequent. A number of authors have called attention to the toxic effects of cocain, among whom may be mentioned H. Richards, D. B. Delavan, J. W. Gleitsmann,[24] and R. O. Cotter.[25] McN. Whistler[26] has twice seen vertigo and threatening syncope after applying to the nasal cavities a solution of cocain stronger than 4 per cent., but Schellenberg of Wiesbaden[27] reports the case of a patient in whom a 2-per-cent. solution of cocain, used in the nasal cavities previous to cauterization, was sufficient to develop severe toxic symptoms.

It would be well to state in this connection that too much importance should not be attached to the strength only of the solution, the principal item being the amount of the alkaloid employed. The application of a 5-per-cent. solution is not necessarily less dangerous than one of 20 per-cent. strength unless the amount used is specified. One dram of the former would contain 3 grains of the drug, whereas 5 minims of the latter contains but 1 grain, which would be less likely to develop toxic symptoms than the former. This point is emphasized for the reason that surprise is frequently expressed at the dangerous effects produced by a weak solution, the quantity of the solution used not being taken into consideration. A case of serious collapse from the use of cocain after an operation on an accessory cavity is reported by Baden of Denmark,[28] and F. Fox[29] gives an instance in which spraying of the throat for fifteen minutes with a 2-per-cent. solution of cocain produced weakness of the lower limbs, staggering, depression, and finally unconsciousness lasting for several hours. The amount of cocain that could have been absorbed by even this weak solution, when continued for fifteen minutes, is quite sufficient to explain the toxic effects produced. The application of a 4-per-cent. solution in a case of glossitis, which was followed by the most threatening symptoms, is reported by W. Richert.[30] Recovery took place under restoratives, but a second application produced the same effects. Gourand[31] refers to a case in which a 4-per-cent. solution was applied to the tonsil of a young man, and Fischer of Saaz [32] reports the case of an actor suffering from chronic pharyngitis in which the application of a 4½-per-cent. solution was used, both being followed by violent toxic symptoms.

In this regard it would be proper to state that the toxic effects of cocain in the pharyngeal or oral cav-

ities do not develop as readily from simple applications as in the mucous membrane of the nostrils, owing to the far greater power of absorption of the Schneiderian membrane. This is so rapid that cocain symptoms may be produced from its simple local application almost as quickly as when injected hypodermatically into other parts of the body. The pharynx and tongue possess this absorbability to a much less degree, and the application requires more perseverence, not only on account of the lack of absorption, but also owing to the fact that the solution is quickly diluted by the saliva which is secreted. A somewhat remarkable case is reported by Castex,[35] in which the application of a 20-per-cent. solution of cocain to the nostril was followed by severe local symptoms, the patient two days later ejecting from the naris a membrane analogous to one formed in fibrinous rhinitis. This circumstance might have been considered only in the light of a coincidence had not a previous application of cocain produced a similar result.

A number of substitutes for cocain have recently been suggested, such as eucain "A" and "B," holocain, etc., the advantage claimed for each of these drugs being its less toxic character. The limits of this article will not permit me to discuss the relative merits of these drugs. They have not come into general use and have not been applied in a sufficiently large number of cases to enable one to form a just valuation of their merits. This circumstance alone should be sufficient to prevent one from speaking too strongly of the absence of danger in using them, as recently has been done on several occasions. The method of Schleich in applying cocain is an important modification and is now very extensively used. The small amount of the drug in the formulæ of this method minimizes its toxic effects and it should be given the preference whenever applicable.

In addition to the toxic symptoms which may arise from the application of cocain one must consider a more remote effect but one which is far-spread in its evil and which now offers a serious menace to society. I refer to the development of the cocain habit. I regret to state that this habit follows more frequently from its application in the nose and throat than in any other branch of medicine, and in the majority of cases it results from the ill-advised prescription of the physician. In acute coryza in which it is so often used cocain temporarily relieves the turgescence of the tissues, the sneezing, and the irritability, and when once this dangerous agent has been placed in the hands of the patient, it is frequently a *facilis descensus*. The patient who applies this drug, and frequently the physician who prescribes it, little realizes that this beneficial effect is soon followed by dilatation of the cavernous tissue, due to paralysis of the vasomotor nerves, and that its continued use causes chronic congestion of the tissues which requires the cocain to be applied more and more frequently until even this remedy fails. That this effect frequently develops is shown not only by medical literature but also by the fact that many physicians use this as a routine measure not only for their patients but even for themselves. Hay-fever is another pathologic condition which encourages the abuse of this drug, and it frequently lays the foundation of a chronic nervous affection of the patient. A number of such cases have come under my observation and many have been recorded. It is to be regretted that the application of cocain in these affections has been recommended, and even in text-books on rhinolaryngology. Thus I find a well-known author who recommends a 4-per-cent. solution of cocain in acute rhinitis and acute pharyngitis, and another, an aurist, who recommends a 10-per-cent. cocain spray (!) in acute coryza.

The development of the cocain habit in this manner is an easy process, and the results are not only as dangerous as those of the morphin habit but are claimed by some to be even more rapid. Among these effects is a rapidly developing marasmus characteristic of this form of intoxication. The psychologic symptoms are quite marked, consisting of apprehension, delusions, and hallucinations, which sometimes resemble those developing in chronic alcoholism. There is insomnia, loss of appetite, and frequently complete impotence. The severity of these symptoms indicates that the substitution of cocain for the morphin habit is an exchange of no benefit to the patient, and the withdrawal of the former is sometimes followed by more severe reaction than in chronic morphinism. Among those who have called attention to the evil effects of cocain in this particular are Lennox Browne,[36] J. W. Stickler,[37] J. H. Woodward,[38] Seifort,[39] Obersteiner,[40] and Loewenberg.[41] The latter records two cases of young women who suffered from serious toxic symptoms, as insomnia, visual and auditory hallucination, attacks of mania and melancholia, anorexia, and gastralgic pains. The origin of the habit was the use of a snuff powder which contained cocain. Instead of using three or four pinches per day these patients took the powder in its entirety, the writer estimating that 1½ grams (23 grains) were used daily. In a case reported by A. P. Luff,[42] the patient used a 5-per-cent. solution of cocain in the nostrils on account of attacks of coryza. The remedy was found to be so pleasant that the patient became

addicted to its use and continued it for three years. At this time he was completely unfit for work and suffered from dyspepsia, chronic constipation, and palpitation. A similar case is reported by Finkelnburg,[41] in which a woman developed the cocain habit from using a snuff consisting of cocain and starch (5 to 100). The symptoms present were excitability, absent-mindedness, insomnia, hallucinations, dilatation of the pupils, and a disposition to cardialgia. An interesting case is reported by Maurel[42] in which a lawyer became a slave to cocain inhalations, this having been prescribed three years before for persistent asthma. The faculties had apparently become heightened and more headwork was done, but symptoms of brain degeneration, with unsteadiness of purpose and will-paresis had developed, the patient all the while believing himself to be improved.

Physicians, who suffer so frequently from chronic morphinism, are not exempt in regard to the cocain habit. The same facility of its use which is so often responsible for the development of the morphin habit also applies here, and unless the evil effects of the use of this drug are fully understood the number of cocain habitués will soon be greater than those suffering from morphinism. Two cases in physicians are reported by Zenner,[43] one of whom suffered from the cocain habit alone and the other from mixed morphin and cocain. In the first case the object of the cocain was to relieve fatigue due to work, but the physician soon developed an irresistible craving for the drug and abandoned himself entirely to its toxic influence. He lost his practice, squandered his property, and was brought to the brink of ruin. After four attempts at abstinence within two years he finally succeeded but still remains an attendant at the asylum where he was treated. In the second case cocain was used as a substitute for morphin. The delusions and hallucinations characteristic of cocain delirium developed to a marked extent in this case. At one period the patient used 60 grains of cocain hypodermatically per day. Ineffectual attempts had been made to discontinue its use but he finally died from tetanus after injury from stepping on a fork. A case of mixed addiction—morphin and cocain—is also reported by Laury,[44] the habit for the latter drug having been acquired by its use as a substitute for the former. The effects were of the most disastrous character, and Laury regards cocain as a toxic agent far more formidable than morphin on account of the rapidity and intensity with which the sensory, motor, and intellectual derangements develop under its use.

Investigations on animals have shown that in chronic cases of cocain intoxication there is a marked hyperemic condition of the central nervous system which presents a contrast to the other organs which are anemic.[21] Albuminoid degeneration is especially marked in the ganglionic cells of the spinal cord and the nerve-cells of the heart ganglia; it is present also, but to a less marked degree, in the muscular fibers of the heart, in the ganglionic cells of the medulla oblongata, and in the hepatic cells. In these last three is found an accumulation of glycogen. In chronic poisoning the degenerative processes are found to have advanced further in the cells of the spinal cord and medulla, minute cavities, atrophy, and hyalin degeneration being noted. In the heart there is fatty degeneration of the muscular tissue; in its nerve ganglia there is fatty degeneration, minute cavities and simple atrophy; and in the liver, atrophy of the hepatic cells is present. The vascular system is most affected in the spinal cord, there being cellular proliferation and hyalin degeneration of the coats. In the heart and liver an atrophic condition of the tissues is found, also a swelling of the endothelium of the capillaries of the cardiac ganglia.

In the majority of cases in which the cocain habit is established a prescription of the physician is responsible for the evils which result. When such a remedy is placed in the hands of a patient for an ordinary coryza, hay-fever, and many other conditions in which there is transient or only apparent benefit from its use, the habit is easily contracted, and many druggists, unfortunately, are prepared to supply all of the deadly drug that the patient may demand. In view of these considerations, the rule has a substantial foundation that cocain should never, under any circumstances, be prescribed for the patient's use, and above all, for the nasal cavities, where the application is made with such facility and from which many of the most severe cases have resulted.

A pecular phase of the cocain habit which has developed in New Orleans and in a number of other cities in the South is the contraction of this habit by the negroes. The extent to which this has spread can be easily verified by druggists and in police circles. It is not used in the manner generally prescribed, but a few crystals of the drug are snuffed into the nostrils, not on account of its contractile effects on the nasal mucosa, as is usually the origin of this habit in the Caucasian, as the nasal passages of the negro are normally quite patulous, but on account of its exhilarating effects. The physical and mental wrecks which soon result from this vicious habit attest to its pernicious effects.

While admitting the danger and evil results of the abuse of this drug, we should not, on the other hand, go to the extreme in condemning it in its

entirety, as has recently been done on several occasions. That this should be the case, however, is not unnatural, being the return swing of the pendulum of the early enthusiasm with regard to it. What is needed is that one should have a proper realization not only of the benefit but also of the danger of its application. The medical profession should be made thoroughly acquainted with the complications which may arise from the use of cocain, and the evil of placing such an agent in the hands of a patient. The druggist should be compelled to restrict the sale of this as well as of other toxic drugs to the prescription of the physician. As stated before, however, cocain should never be placed in the hands of the patient under any circumstances, as the habit is so easily acquired. In this manner we may retain the use of a valuable drug, and, by exercising proper care, eliminate its evil effects.

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ACUTE DELIRIUM.[1]

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THE causes of acute delirium are not very well understood. Laverand reports a fatal case produced by a spiritualistic *séance*,[2] Spatling, a case from overwork,[3] and Potts[4] reports finding the pneumococcus in the fluids from a case of the disease. This was probably a mere coincidence, or possibly sufficient care was not taken to sterilize the instruments used in making the bacteriologic examination. Prout[5] reports a case with *ante-mortem* thrombi in the circle of Willis; but these were possibly a result rather than a cause of the disease. The most extensive article I have seen dealing with this subject is that of Dr. H. C. Wood in the *American Journal of the Medical Sciences*, April, 1895. Dr. Abbott made the bacteriologic examination in a case reported therein and his report is as follows: "I have not succeeded in finding *anything* either by microscopic or culture methods in the material taken from the meninges of your case on Saturday."

Acute delirium may follow or develop during other diseases. Potts relates a case, fatal the third day, following carbuncle of the upper lip. It may also arise, seemingly, *de novo*, for often one is unable to find any causative agent. Both sexes are alike liable to it. It is a disease of adult life, both extremes of life being partially exempt. From fourteen to forty-five years is the age most liable to the disease. More cases occur under thirty than afterward. I believe it to be a toxemia expending its force upon the cortex cerebri. It possibly is an auto-intoxication due to deficient elimination, or to the absorption of waste materials which should be thrown off by the emunctories, or to overwork, either mental or physical. Kraft-Ebing thinks the disease due to hyperemia with irritation, and, as a consequence, exudation, which causes pressure on the nerve-cells. In the latter stages this exudation amounts in quantity to an edema, but this hyperemia and exudation are results rather than causes. Heredity plays no part in its production.

[1] Read before the Middle Tennessee Medical Society.
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The disease usually begins very suddenly and the first impression made by the patient on his family and friends is that he has "gone crazy." Occasionally the attack is preceded for a few days by distinct prodromic evidences of cerebral disturbance. I have had three cases under my care and in each of them the onset was very sudden.

Case I.—Female, aged fifteen years; seen in consultation with Dr. Hatcher of Hazlegreen, Ala. Previous history good; mother died in childbirth; father and one sister living and healthy. No history of insanity or other cerebral troubles on either side of the family. A paternal cousin is an epileptic. The patient menstruated at twelve and has been regular ever since; period then due. She was of excellent family and had always been very modest and extremely chaste in her language.

Dr. Hatcher was called to her in the early part of the night of October 24, 1893. She was very restless and slightly delirious, using uncouth language, complaining bitterly of pain in her head, also somewhat of pain in her hips and back. There was great motor excitability, the patient desiring to be in constant motion, and occasionally cursing and abusing those about her. He gave morphin hypodermically, and bromid internally. She steadily grew worse, and at dusk, October 25th, I saw her. She was sitting up before the fire talking rapidly and swearing with almost every breath all the oaths in the vocabulary. No words were too foul to pass her lips. She recognized every one and spoke to me, calling me by name, although it had been three years since I had seen her. When I offered to place the thermometer under her tongue she cursed me and said she did not want that nasty thing in her mouth and placed it in the axilla. Her temperature was 101° F.; pulse, 100. The pupils were about normal — possibly slightly contracted. Sense of hearing was extremely acute. After one had talked with her a few minutes and left her for a short time she would speak to him as if she had not seen him for days, having no recollection that the visitor had left her only a few minutes before. Although she knew everybody she could not talk rationally. There was absolute anorexia, but no nausea or vomiting. The bowels were constipated and action of kidneys sluggish, but the urine was normal. She did not try to fight the attendants but tried to destroy everything she could get her hands on. As she was growing worse we stopped the morphin and gave her 30 grains of chloral. As a result, she slept five hours but awoke worse than ever. She jumped out of bed, caught up a guitar and played a bar or two and then smashed the instrument over a chair and cursed violently. I gave her another dose of chloral, 15 grains, but this did not produce much sleep but kept her quiet and dozing for several hours. I had given her calomel and aloes and in the morning a good action of the bowels was secured. She continued to grow worse. Sulfonal, trional, paraldehyd, etc., were tried, but hyoscin hydrobromate in large doses gave the best results; after taking $\frac{1}{100}$ of a grain she would sleep from six to eight hours. She died on the thirteenth day from exhaustion. She was never rational, but for five or six days before she died the delirium was more of a typhoidal type and the physical excitement was not nearly so great; indeed, it was almost absent because of the complete prostration. The highest temperature was 102° F., the lowest 100.5° F. The bowels were constipated all the time. For several days before she died she was apparently blind, the pupils being widely dilated.

It is of importance to carefully watch the temperature in these cases, both for diagnostic and prognostic reasons. It very seldom rises above 103° F., or falls below 100.5° F. Patients usually live from ten to fifteen days, though they may die in three or four days, as illustrated by the following:

Case II.—Female, aged thirteen years. Family history good; no consumption; no insanity; no epilepsy or other cerebral disorders; no drunkenness; parents and large family of brothers and sisters living and healthy. Had never menstruated and signs of puberty just beginning to appear. Temperature in axilla 100.5° F.; pulse, 110. The patient was very delirious, cursing, blackguarding, rolling and screaming. She complained bitterly of headache. Pupils slightly dilated, but reacted to light. Bowels costive; no nausea or vomiting. I at first thought this was a case of hysteria, but soon discovered my mistake. She died suddenly at the beginning of the fifth day while sitting over the commode.

The great physical excitement deserves careful attention, as in no other disease have I ever seen such universal and constant motion. The rapidity of exhaustion is remarkable. A robust person weighing 150 pounds will rapidly lose 50 pounds. The urine is usually diminished in quantity and often has to be withdrawn by a catheter. Vision is weakened and may be lost entirely for several days and then recovered, as will be shown to have occurred in one of my cases. I believe that in fatal cases blindness usually occurs before death, but I cannot be positive on this point. The sense of hearing is extremely acute, the patient starting at the least noise, declaring devils are about her. The sense of smell in one of my cases was increased very considerably. All the patients I have seen have had delusions of some kind. The sense of touch may be normal at first but later becomes benumbed. If sitting on a chair or bedside the feet and legs are moving as if trotting a baby on the knees. The arms and hands are in constant motion as if washing dishes, churning, or working a pump-handle, while the muscles of the trunk sway the body back and forth or into various positions. The third and last of my cases brings out many of the above points.

Case III.—Female, aged twenty years; seen in consultation with Dr. Jean of Lincoln, Tenn. Sin-

gle, robust young woman, weighing 145 pounds. Menstruated at twelve, but had never been regular. Early in menstrual life the menses would appear every two weeks; later they would sometimes miss five or six months. She was a stout country girl, raised to work, milk, cook, churn, or do the family washing, as the case demanded.

Family history perfect. The patient had had typhoid fever four years previously, and measles when a child. She was taken when at church Sunday with what was thought to be a chill, but the slight fever was not sweated off, and the delirium was out of proportion to the amount of temperature.

I was called the following Tuesday, August 13, 1895. So much did the shaking and general physical excitement resemble a chill that the messenger stated that the patient had a chill and they thought it was of the congestive type as she was still shaking, not having gotten entirely over the Sunday shake. The muscular tremor, pain, and delirium were not so marked Monday as they were then or had been on Sunday. I reached her at 2 P.M. She was sitting on the edge of the bed and it seemed that every muscle in her body was in rapid motion. She recognized me and asked that I do something for her and then drifted into all kinds of foolish talk. Dr. Jean was giving her a hypodermic of morphin when I went in. After a few minutes she was more quiet physically.

My first impression was that we had to deal with an aggravated case of hysteria, and so expressed myself, but when I had an opportunity to make a careful examination I found the pulse 100, the temperature 101° F., pupils slightly contracted, bowels constipated, action of the kidneys limited, skin dry, anorexia, no nausea, no vomiting, and, of more importance than any other single symptom, that she did not remember that I had been with her only a few moments before. The delirium, while constant, was not of that vile, profane, uncouth nature of the two preceding cases. She would talk of her menses in one breath, of her sweetheart in another, and then of the ailments of some one else, in a few moments talking of a dozen different things. Her hearing was extremely acute and the least noise would cause her to scream for protection. The sense of smell was also unusually acute. If I had been smoking she would quarrel with me about it as soon as I came in. Her body was in constant motion, being thrown in all directions, the feet and legs going all the time, making it difficult to keep the bedcovers on her. She would roll from one side of the bed to the other and then back almost constantly. Morphin would quiet the muscular tremor somewhat, but had no effect on the delirium, unless it was to make it worse. Heart and lungs were normal. There was considerabie tenderness of the left ovary.

She lost flesh very rapidly and would, I think, at the end of ten days, not have weighed more than 100 or 110 pounds. We discontinued the use of morphin and gave her fluid extract of ergot, bromid of potash, and chloral hydrate, and during the night gave hydrobromate of hyoscin, gaging the dose by the effect, but never giving less than $\frac{1}{100}$ of a grain, and often three times that quantity. We used sulfonal, trional, duboisin, etc., but nothing gave the good results obtained from the hyoscin. At the end of a week, when the physical excitement had abated, we gave her strychnin and digitalin. We also employed enemata or cathartics to unload the bowels when necessary. Her temperature varied from 100° to 103° F., but was usually about 101° F. Her pulse varied from 100 to 135 or 150. About the tenth day of the disease it was found that she was totally blind, though the sense of hearing and smelling was very acute. At this time the physical symptoms were at their worst, and then began to improve gradually. The blindness lasted four days, and then sight slowly returned, but two weeks later she was unable to see the hands of a watch.

The mental symptoms began to improve a week after improvement was first noted in the physical symptoms. When the physical symptoms began to improve the appetite returned and she rapidly gained flesh and strength. Two weeks after I had ceased my visits she had a slight relapse, but being sick myself at the time I did not see her; Dr. Jean and the family tell me it was nothing to compare with the first attack. I saw her a few days ago—two years after recovery—and she seems in perfect health mentally, and weighs 150 pounds, but under excitement there is yet some jerking of the muscles, especially the right hand and arm. She has no recollection of my seeing her while she was sick.

Let us examine the points of interest in these three cases: Concerning the cause of the first two I am unable to arrive at any conclusion; the third was probably caused by worry on account of the non-appearance of the menses. All of the patients were constipated; all had great motor excitement; all were delirious; all had fever—100° to 103° F.; all had rapid pulse—100 to 130 or more; in two the pupils were slightly contracted at first, but all were dilated later on; in one blindness occurred which lasted four days, and I believe the two who died were blind before death occurred, or that the vision was extremely dim; all had severe headache; in all the sense of hearing was increased; in one the sense of smell was also increased, which was probably true of the other two but was not noticed; tactile sensibility was normal or slightly increased in all at the beginning, but after a few days it was diminished; all had insomnia; in all the action of the kidneys was diminished, but this was probably due to the limited amount of water taken into the system; in all the action of the bladder was weakened and occasionally required the use of the catheter; all rapidly lost flesh; all could recognize the doctor but could not talk rationally; in no case was there nausea or vomiting; no paralysis; and in the patient who recovered there was no memory of anything that occurred during her illness.

The first patient died in two weeks; the second died in four days, and the third was beginning to improve at the end of two weeks.

The symptoms, in a few words, are: Elevation of temperature, rapid pulse, absolute insomnia, acute hearing, dimness of vision, wild hallucinations, outbreaks of great violence, and great profanity and vulgarity from the most refined and gentle of girls. The patient sees devils, scorpions, lizards, and rats; tears her hair; beats herself or the wall with her hands; throws her feet in the air; destroys anything she can get her hands on, but shows no disposition to fight; great motor excitement; the ability to recognize friends and inability to talk rationally; forgets in a few moments that she has seen you. At the end of a week or ten days she gradually passes into a typhoid condition and dies within fifteen days in coma. Death may occur in from three to five days, in which case it occurs during a paroxysm.

I can readily see how a case of acute delirium could be mistaken for one of typhoid fever if not seen until exhaustion has set in, unless one is careful to obtain a thorough history of the case. Folsom[1] says typhoid patients are sometimes sent to the asylum as cases of acute delirium. The regular rise of temperature, the eruption, the diarrhea, all make the diagnosis of typhoid easy, and if doubt remains, the bacillus of typhoid may be found.

Acute delirium may be mistaken for hysteria for a short time, but the clinical differences are so marked that the mistake will soon be corrected. The hysterical patient may not emaciate, she may have retention of urine, but the secretion is abundant; she will not have the temperature so constantly elevated; one will detect the hysterical patient at every point making use of all means to gain sympathy, but the patient with acute delirium neither desires nor tolerates it. Hysterical patients are not usually profane or vulgar.

Acute delirium and acute mania are more frequently mistaken for each other, and the differential diagnosis is more difficult to make, but with care it may be done. The symptoms of acute delirium are much graver, the course briefer and more definite, and the temperature is elevated in acute delirium and lowered in mania. The exhaustion is very rapid in acute delirium while the maniac will continue to rave for months with little perceptible loss of strength. Mania is a conscious delirium, the patient being aware of what he is doing and taking every advantage of his attendants. Acute delirium is an unconscious delirium, the patient never trying to take any advantage, and, although he recognizes those about him at the time, five minutes later he does not remember to have spoken to them. In mania the appetite is usually enormous, while in acute delirium it is always absent. Mania is preceded by marked prodromata, while the prodromata of acute delirium are never marked and often absent. In mania the face is often flushed and the sclerotics injected; in acute delirium it is pallid and there is no injection of the sclerotics. Acute delirium terminates in death or recovery in two or three weeks, while mania usually persists for months.

Wood, in the paper already referred to, sums up thus: "The symptomatic differences between acute delirium and acute mania are found in the suddenness of the onset of acute delirium, in the rapidity of development of typhoid symptoms, and especially in the presence of a pronounced febrile reaction." Kraft-Ebing is quoted as saying that if in any case of mania the temperature rises to 105° F. it strongly indicates the presence of acute delirium; but it should be remembered that any inflammatory complication will cause a rise of temperature.

The pathology of acute delirium is little understood. I regret that in neither of my fatal cases was I allowed to make an autopsy. There is hyperemia of the cortex and membranes, which is rapidly followed by edema and choking up of the lymph-spaces with blood-corpuscles. Minute hemorrhagic foci are found in the cortical substance and there may be diminished consistence of the brain.

Dr. Guiteras reported as follows on Dr. Wood's case, previously referred to: "No gross lesion was apparent except that the membranes were congested, but not opaque. . . . Fresh sections into the brain substance showed well-marked congestion. . . . The inflammation process affects the blood-vessels, the lymph-channels, and the connective tissue. . . . There is nowhere to be found in these tissues any tendency to liquefaction or suppuration. . . . No bacteria or other abnormal contents are found in the blood-vessels. . . . Ganglion cells and protoplasm show no structural change. . . . No evidence of degeneration of the myelin." Certain it is we do not really know what the pathology is, for the changes found are insufficient to account for the symptoms present. My opinion is that the cause of death is the impression made on the cortical cells by a microbe, or the ptomains produced by a microbe, though what these changes are we do not know.

Comparatively little has been written concerning the treatment of this disease. Osler says he would not hesitate to bleed freely, but I think we should select our cases in which to employ this measure. In fulminant cases, such as Case II., above reported, I believe bleeding would be of service and

[1] Pepper's "System of Medicine," vol. v.

regret that I did not employ it, but owing to the extreme rapidity of exhaustion one should avoid all measures calculated to depress the patient. If bleeding is resorted to at all it should be in the very beginning of the disease. Cold may be applied to the head with good results. The bowels should be well emptied by the use of calomel. Ergot may be given for its effects on the blood-vessels, but I have little faith in it; if used, it is best given hypodermically. Bromid and chloral may be given freely. Paraldehyd caused quiet sleep in one of my cases, but it has to be given by the mouth and is therefore not so useful as drugs which may be given under the skin. Duboisin has many friends, but in my hands it has failed to come up to its recommendations. Sulfonal and trional are useful, but owing to their limited solubility in water are inconvenient to administer. Trional is by far the preferable drug of the two. Morphin alone is positively harmful, but may be given advantageously combined with hyoscin. Hydrobromate of hyoscin, in doses of from $\frac{1}{60}$ to $\frac{1}{30}$ of a grain, far exceeds all other remedies that I have ever used in any form of insanity. It must be given freely. I have never seen any bad results from its use, and in a case of acute melancholia with absolute insomnia of a week's duration, which I had the pleasure of seeing in consultation with Dr. Davis, in which morphin and the bromids had absolutely no effect, I gave $\frac{1}{10}$ of a grain of the drug at a single dose, and the girl was asleep in two minutes and slept eleven hours. She made a good recovery. After a large dose the patient will gasp a few times and if one is not well acquainted with the action of the drug—not from reading alone, but from bedside observation— one will fear that immediate dissolution is impending. If the patient is left alone she will be all right, but administer restoratives and the like and she will be very apt to die. When exhaustion has set in strychnin should be given in oft-repeated doses. The heart should be supported with digitalin.

During the entire course of the disease an effort should be made to nourish the patient with liquid food. When the crisis is reached stimulants should be given in the form of egg-nog. The room must be kept absolutely quiet from the beginning of the attack and more than two persons should never be permitted to remain in the room at once. The bladder should be emptied regularly with the catheter and the bowels opened daily with enemata.

Dr. Senn Resigns His Position in the Army.—At his own request Lieutenant-Colonel Nicholas Senn, Chief Surgeon of Volunteers, was honorably discharged from the service of the United States September 21st. Dr. Senn has returned to Chicago to resume his professional work.

THE VALUE OF ELECTRICITY IN GYNECOLOGY.[1]

BY W. E. FORD, M.D.,
OF UTICA, N. Y.

THE usefulness of any therapeutic agent or of any single surgical procedure is not determined so much by the enthusiastic advocates who are especially skilled in the matter, as upon the evidence of the average practitioners who are doing the great bulk of medical and surgical work in the world. An agent that is even fairly successful in the hands of the great majority of educated physicians cannot be justly condemned because there are experts in the same field who secure more brilliant results by other means. Sober-minded people are not very much impressed by the enthusiastic utterances of those who claim to secure marvelous results by any single therapeutic agent, but the fact that enthusiastic writers claim altogether too much for any new method or agent should not wholly condemn it. Time alone settles the question of usefulness of any therapeutic agent or procedure. The prejudice which to this day exists regarding electricity in gynecology or in any other branch of medicine or surgery, is not altogether unjustifiable. In some form or other it has been used for so long a time, and the fact that its influence is mysterious, has kept it before the mind of the profession as long as medical records have been kept.

The earlier experimenters who announced astonishing results from the use of electricity in sickness were rarely scientific men, and very frequently were not physicians at all; and even down to the last decade electricity has principally been used by quacks. External therapeutic agents received very little intelligent attention from medical men during all those years when drugs were given in heroic doses. Massage, and the various forms of baths, when I was a student, were looked upon with very little favor by the so-called regular profession. But calomel has not ceased to be a useful agent simply because it is no longer given in the heroic doses of the olden times. Massage has come to occupy a useful and dignified place alongside of various kinds of baths in the treatment of different disorders.

It was unfortunate for electricity that its revival upon a scientific basis, with the introduction of instruments of precision which not only regulate the quantity of electricity to be used but also enable us to record the results in scientific terms and thus show what it really can do, came with such enthusiastic and vociferous claims as to its universal efficacy on

[1] Read at the Twenty-third Annual Meeting of the American Gynecological Society, Boston, May 24, 25, and 26, 1898, in discussion of the topic: "Has Electricity Ceased to Be a Useful Therapeutic Agent in Gynecology?"

the part of the few men. Modern surgical gynecology was developed at about the same time and gave such brilliant results that more conservative measures were ridiculed by many who would acknowledge nothing but the knife as the savior of womankind. In exactly the same way hypnotism, which was making really wonderful advances, was relegated to obscurity by the discovery of ether and chloroform. There is no doubt that electricity would have held the first rank as a useful agent in gynecology, even in the treatment of fibroid tumors of the uterus, had not aseptic surgery reduced the mortality of abdominal operations to such an astonishing degree within the past few years. It is as unfair as it is unwise at this time to say that all therapeutic agents are useless which do the work that may be more brilliantly done by surgical procedure in the hands of a few expert operators. It is not true that operative work which is so successful and so brilliant in the hands of a few is safe or even justifiable in the hands of the many; but lesser procedures, not involving the same risks and accomplishing satisfactory results in perhaps a slower and more tedious way, must and ought still to be recognized and advocated for the relief of minor ailments.

There are many things in gynecology which electricity does very much better than any other agent which we now know. Its field is limited and fairly well defined, and within these limits electricity may be used, not only with safety but with great advantage by us all. Perhaps there is no better way of stating this subject concisely than to mention certain conditions that are very markedly benefited by this agent, upon which all fair-minded operators of considerable experience would agree.

Cases of amenorrhea in young women, not dependent upon true anemia, but rather in connection with plethora, in which there is an undersized or undeveloped uterus due to perimetric inflammations which have resulted in slight bands of adhesions about the broad ligaments, cutting off the blood-supply, are not only very important as a class but they resist every method of treatment except that by galvanism. Again, amenorrhea following long, exhausting nervous affections with or without anemia, is in almost all instances relieved by faradism applied but a few times. This last class of cases is, of course, not so important as the former, but, nevertheless, after insanities and the graver nervous disorders, the tendency to relapse is much lessened by the early establishment of this function which usually has been suspended.

Simple metritis, where the ovaries and tubes are not infected, is successfully treated by galvanism, as is simple metritis due to subinvolution. Curetting and packing is more brilliant but not always a more certain method of relief; and owing to the fact that a single curettement is not always sufficient, a surgical procedure is not in all cases more speedy. Perimetric inflammations without the formation of pus, leaving exudates in the broad ligaments with more or less fixation of the uterus and ovaries, is as successfully treated by galvanism as by surgery. In these cases the amperage of the current must be large in order that the electrolysis may be secured. Collections of pus within the tubes or about the ovaries, or in pockets back of the uterus, always prohibit the use of galvanism.

Dysmenorrhea dependent upon a neuralgic tendency or upon the presence of slight bands of constriction about the Fallopian tubes, without pus formation, is more speedily and more permanently relieved by the intelligent use of galvanism than by any other means Obstructive dysmenorrhea, in which some of us have less faith than we used to have, is more speedily relieved by the slitting of the posterior lip of the cervix, thorough divulsion, curetting, and packing. It will be found, however, that these cases are not so numerous as those in which painful menstruation is due to the causes first mentioned. Even in these cases where there is a pin-hole os, and an undeveloped cervix with a flexure, galvanism brings about a cure in the majority of cases. The total amount of misery, disability, and attendant nervous disturbances produced by the conditions mentioned would seem to be almost as great as that produced by fibroid tumors and kindred grave affections. Of course, the mortality is less, but if unrelieved it is doubtful whether these simple cases may not develop into the most serious affections.

Up to this point I think no one will dispute the superiority of electricity over other agents and methods, if the physicians have been in the habit of seeing much gynecological work in private practice and have given electricity serious consideration. There are other disorders which can fairly be said to belong to surgical gynecology, but in which the patients refuse operative procedure and in which electricity used as a palliative or as a more slowly curative agent is decidedly useful. Hydrosalpinx is such an ailment which, though rare, I have repeatedly seen entirely relieved by galvanism. Subinvolution dependent upon an infection after childbirth, where there are no purulent collections about the tubes or ovaries, may be relieved and still allow the patient to pursue her ordinary avocation, a matter not to be treated lightly among working women. Small fibroid tumors embedded in the wall of the uterus, causing inconvenience by reason of weight and pressure, may

not only be successfully treated by galvanism, so that they lessen in size and become stationary for many years, but they may also be caused to entirely disappear in some instances. I have never yet seen a large fibroid tumor degenerate from the use of galvanism or become changed in any way so that it could not be operated upon as easily after the use of electricity. The charge that galvanism used with any degree of skill in cases of large fibroids renders them inoperable, is not based upon any known fact.

Some ten years ago, when hysterectomy was attended by a higher mortality, and when my own skill as an operator did not warrant me in removing large fibroids, in instances in which the patient refused to have a total extirpation by other more successful operators, I used galvanism in very large currents after Apostoli's method in a large number of cases. During the past five years I have advised the removal of fibroids by the knife, and now generally perform this operation in preference to any trial with galvanism. I have been surprised, however, within the past year to find a number of these cases of ten-years' standing in which there has been no increase in the size of the tumor, and little if any recurrence of pain, the subjects being able to work and refusing operation for total extirpation, even though the dangers are very slight. This in no case relates to bleeding fibroids, or to purely subserous growths.

In the clinic established at St. Luke's Hospital two years ago for working women only, I urged upon the attending physician the value of galvanism in the class of cases I have mentioned. He expressed strong objection to its use on the ground that previous experience in Philadelphia and Boston, where he had seen a large amount of the best surgical work of a gynecological nature done, had proved that it was not only useless but dangerous. I insisted, however, and now there is no more enthusiastic advocate of the use of electricity in the treatment of the minor gynecological disorders of the working classes than this physician.

I am firmly convinced, therefore, that electricity is useful in gynecology, that it will hold its place, and that many who have abandoned it for more brilliant operative procedures will resume its use. Those who are not giving their entire time to surgical gynecology, but who must care for the minor cases of this kind while also doing general medical and surgical work, will continue to testify to its usefulness.

Smallpox Quarantine against Mexico.—Notice has been given to the Mexican Central R. R. officials that no passenger is permitted to enter the United States unless he can show evidence of successful vaccination.

BICYCLE URETHRITIS.

By JOHN M. ROBINSON, M.D.,
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PHYSICIAN TO ST. LUKE'S HOSPITAL.

FOR a time after the advent of the modern bicycle the male perineum, as a medical and surgical subject of discussion, bade fair to rival its analogue of gynecologic and obstetric fame. Lately we have heard less of the theoretical argument concerning the proper shape of bicycle saddles, and the alleged dangers to the sensitive organs involved in the fashionable straddle, yet it seems likely that in the average male rider the deep urethra, the prostate gland, and the base of the bladder are, indeed, subjected to a considerable degree of pressure and bumping; but whether, when these parts are perfectly healthy, any ordinary amount of this pommeling of the perineum can produce disease, I think exceedingly unlikely.

I have had under observation during the past three or four years several sore urethræ, and tender, swollen prostate glands, each case at first appearing to be due to the injurious pressure of a defective bicycle seat, but careful inquiry and examination have always revealed that there was still another cause for the prostatic or urethral inflammation.

CASE I.—A. W., a clergyman, aged about forty-five years came to me complaining of tenderness in the region of the prostate, and slight difficulty in urinating. These symptoms had come on gradually since he began to use a bicycle, two years before. He had an old-fashioned saddle, but was not in the habit of taking long rides.

On examination I found the prostate gland somewhat enlarged and quite sensitive to pressure. The urine contained a number of pus-cells and mucus shreds, but its more pronounced peculiarity was a high specific gravity and an abundance of urates and uric-acid crystals. The general health of the patient was fair, although he complained of occasional "rheumatic twinges" and "bilious headaches." Venereal disease was denied. The man was directed to lay aside his wheel; lithia water was ordered, and a regimen instituted suitable to his uric-acid tendency, whereupon all symptoms of the prostatic trouble abated, and in a few weeks the gland had recovered its normal condition. The following summer the gentleman again took to his wheel; he now used a saddle of the most approved pattern, and drank lithia water "to keep his urine clear," but in spite of these precautions the old soreness soon returned, and he was obliged to give up riding, this time for good.

CASE II.—A machinist, aged fifty years, consulted me for headache, backache, loss of appetite, etc. In the course of my examination I asked for a specimen of urine, and found that it contained a uric-acid sediment and also a number of pus shreds. I asked the patient if he had had gonorrhea. He

admitted but one attack, and that twenty-five years ago, but in the course of this inquiry he mentioned having had considerable soreness after riding his bicycle, and an occasional slight running from the urethra. The prostate gland was enlarged, and the posterior urethra was found to be somewhat inflamed. He was ordered to keep off the bicycle and was treated for a uric-acid accumulation. In a short time the urine cleared up and the urethral irritation disappeared.

CASE III.—While I was treating the man above-mentioned, he spoke of two or three friends who were troubled in the same way—"were sore in the seat after riding and had a little discharge." He said he would send them around for an examination. A day or two later one of them came to see me. His urine was free from an excess of irritating material, but an attack of gonorrhea, three years before, explained, to my satisfaction, the mild urethritis which now followed every long ride on the wheel.

CASE IV.—P. W., a young man much devoted to bicycling, in November last began to have a slight urethral discharge soon after having visited a brothel. This condition lasted not more than a week when all evidences of specific urethritis totally disappeared. Gonococci were not found in the pus which appeared at the meatus. During the following winter there were no signs of urethral inflammation, but about the middle of March, for the first time in four months, the man got out his wheel and took a twenty-mile run, and that evening he brought me a specimen of urine milky with pus-cells. He also complained of some soreness along the posterior urethra. Both of these symptoms disappeared after a few days' rest. I was inclined to hold the November attack responsible for the present trouble.

CASE V.—During the summer of 1895 I treated a young man for a long-continued attack of specific urethritis. Finally the bothersome gleety stage came to an end, and for a year there was neither sign nor symptom of the urethral disease. At the end of this time he went to England, and while there commenced to ride a bicycle. Soon he noticed a little soreness along the urethra and had a little difficulty in "starting his water." These symptoms disappeared when he laid aside his bicycle for the winter, but again made their appearance when he began wheeling during the present summer. He came to me to find what the trouble was. His urine contained small pus shreds, which evidently came from the posterior urethra, and the prostate gland was found to be slightly enlarged. He has had to give up wheeling entirely for every ride brings on more of the old trouble.

Quite recently I was discussing this subject with a medical acquaintance, who had had under his care a patient suffering from a deep perineal abscess, which the doctor attributed to the continual use of a bicycle saddle of the most unhygienic and uncomfortable pattern. I mentioned my own experience in this matter, and the physician replied that his patient had had gonorrhea, but not in five years. To my mind this admission was highly significant in accounting for the bicycle abscess.

My brief experience thus leads me to believe that the inflammations of the deep perineal region, brought on by the use of the bicycle, have nearly always some secondary and underlying cause. Thousands of riders undergo this daily bumping, many of them mounted on rail-like saddles, and all without sign of damage. But the urethra, or the prostate gland, which still has lurking in its crypts and folds some relics of an old gonorrhea, or a mucous membrane irritated by uric acid I think are the conditions which the hard, humped-up bicycle seat is likely to stir into annoying activity. It would also seem to be very wise for men having any enlargement of the prostate to avoid the modern traveling machine.

CLINICAL MEMORANDA.

INTRALIGAMENTOUS FIBROID OF THE UTERUS WITH ADHESIONS TO THE OVARY; MYOMECTOMY.

BY J. COPLIN STINSON, M.D.,
OF SAN FRANCISCO, CAL.

MRS. W., aged thirty-five years. During 1894 she began to have a copious vaginal discharge, although since early childhood she had had a discharge, probably due to vulvovaginitis. In the fall of 1894 she received some form of electric treatment for her pelvic trouble. This was not attended by distress during the treatment, but afterward the pain was excruciating. Since then she had had pains in the pelvis and left side of the lower abdomen. In December, 1897, while lifting a bucket of water, she felt a peculiar pelvic pain which was dull in character and continued for several days. There was also constant pain in the left side. Examination at this time showed that there was milk in the breasts, and the uterus was somewhat enlarged. She continued to menstruate, but the flow had been and was peculiar for some time. She would pass a drop or two of blood during three days, and on the fourth she would begin to flow and the bleeding would always be quite severe and last usually five days; later she would pass clots of blood. She was examined March 13, 1898, by Dr. George Gross, but the abdominal muscles were so contracted that nothing could be made out with any degree of satisfaction. On March 17, 1898, she was examined under chloroform by Dr. Gross and myself. We found endometritis, and the uterus was somewhat enlarged, but in good position and movable. The left ovary was enlarged about three times the normal size, and was prolapsed and adherent. On the right side there was a mass the size of a hen's egg. It extended from the right uterine cornu and right side and posterior surface of the uterus outward into the pelvis.

On April 16, 1898, I operated, assisted by Drs. Gross and Burgess. Chloroform was administered by Dr. Putman, by the drop method. The patient was first placed in the lithotomy position, the cervix was dilated, and the uterus curetted and irrigated. The vagina was then tightly packed with plain gauze. This was done to push the uterus and adnexa as high as possible. The legs were then extended and a vertical incision about 2½ inches long was made above the pubes, dividing slightly to one side of the median line the skin, a thick layer of adipose tissue, the fascia, and the right rectus muscle. The peritoneum was opened at the upper angle of the incision and then torn down to the lower angle with the fingers. She was then placed in the Trendelenburg position, and the pelvis examined. The manipulations and the intra-abdominal work were made very easy by the pushing up of the uterus by the vaginal packing. This I think of value, and I intend to employ it right along in such cases. The fundus was readily located and brought to the surface. In the right cornu of the uterus was a fibroid tumor about the size of a hen's egg. It was firmly attached to the right cornu and the adjacent portion of the posterior surface and wall of the uterus. The Fallopian tube was displaced downward about half an inch, being located in front of the mass, which spread out into the folds of that portion of the broad ligament which contained the vascular supply of the right ovary. The external surface of the fibroid was rather firmly attached to the inner surface of the ovary, which was about 1¾ inches long. Its attachment to the mass was about 1¼ inches long.

The connections between the ovary and fibroid were separated by blunt dissection, aided at times by cuts with a scalpel. This necessitated division of the broad ligament for about 1¼ inches. The dissection was carried very close to the ovary. By this means no vessel was cut that required clamping. The cut edges of the ovary were at once sutured with fine chromicized catgut. This freeing of the ovary cut off about three-fourths of the blood supply. I concluded, rather than sacrifice any ovarian tissue, to trust to the remaining portion of its blood-supply to furnish nourishment for the whole organ. A circular incision was then made around the fibroid at its attachment to the uterus, an estimate first being made of the amount of uterine peritoneum that should be left so that the cut edges could be brought accurately together with sutures. The fibroid was freed and removed from the muscular wall of the uterus by blunt dissection, and the cut edges of muscular and peritoneal layers were united by continuous fine chromicised cutgut sutures. The left ovary was bound down by a few adhesions. These were separated and the ovary and the tube brought to the surface. The tube was patent. The ovary was about three times the normal size and contained several cysts, two of the size of a large hickory-nut, and another one-third this size. These were evacuated and then excised. The raw surfaces where the ovary had been adherent were also excised, and the cut edges of the ovary united with continuous sutures of fine catgut. This reduced the ovary to about one-third the normal size. The cul-de-sac was sponged out and the abdomen closed in separate layers with continuous sutures, of fine chromicized catgut for the peritoneum, chromicized tendon in two layers for the muscle and fascia, and very fine silk for the skin. The wound healed by primary union. The silk stitches were removed on the eighth day. The patient was allowed up and about in the third week, when she went without any bandage or support. She is now quite well. Examination shows the uterus and appendages to be in good position. She menstruated May 18 to 20, 1898, for the first time since the operation. She had no pain. The quantity and quality of the flow appeared normal. She has no pain or other symptoms referable to the abdomen or pelvis.

These favorable results show that conservative operations, or what I think would be better called scientific pelvo-abdominal surgery, should be more frequently employed as our patients can be cured without interference with the physiological actions and relations of their pelvic organs. I believe that when it is possible one should avoid removing any portion of ovarian tissue that appears normal, even though the portion of ovary remaining be small. Resection and plastic operations should be practised when pregnancy is liable to occur and delivery at term can be conducted with safety. An effort should always be made to cure our patients without depriving them of their menstrual function, as sometimes the symptoms which follow double oophorectomy or hysterectomy are more taxing than those which were present before the operation was performed. I report this case as it presents several points illustrative of conservative operations on both the uterus and appendages.

A CASE OF SYRINGOMYELIA.[1]

By THEODORE DILLER, M.D.,
OF PITTSBURG, PA.;
NEUROLOGIST TO THE ALLEGHENY GENERAL HOSPITAL.

C. A., an iron-worker, aged thirty-nine years, who had all his life enjoyed good health, noted two and one-half years ago some weakness in his shoulder muscles. A few weeks later atrophy of these muscles appeared. This paralysis and wasting have progressed steadily up to the present time. He has never suffered from pain. During the last two years he has frequently burned his fingers because of inability to distinguish hot articles.

Examination on March 1st showed marked scoliosis in the cervicothoracic region of the spine (which the patient stated had been present since childhood), great wasting of the scapular muscles and those of the upper arms, and, to a less extent, those of the lower arms and hands, and trophic changes in the hands, *viz.*, roughness and dryness of the skin and nails, vasomotor stasis, and a peculiar stiffness of the fingers. There is great loss of muscular power in the hands, arms, and shoulders, much more marked on the left than on the right side. Both knee-jerks are exaggerated and there is clonus in the left foot. The gate is spastic.

[1] The patient was presented to the Pittsburg Academy of Medicine, March 14, 1898, and to the Allegheny County Medical Society, March 15, 1898.

Tactile sense is preserved over all parts of the body. Over almost the entire body, except the face, the lower abdomen, the posterior portion of the thighs, half of the anterior portion of the right thigh and a strip running up the left side, he is unable to distinguish heat, or else is uncertain in his recognition of it. Over the entire body he recognizes cold objects brought in contact with the skin. Over the skin of the arms, trunk, head, and neck (not face), except over the lower buttocks and abdomen and left side, sharp pinches, needle-pricks, etc., do not give rise to a sense of pain, or only to a slight one. These areas of analgesia and thermo-anesthesia, it will be noticed, overlap in the trunk, arms, and head.

The accompanying diagrams, kindly made for me by Dr. Babb, indicate better than words the areas of anal-

FIG. 1.

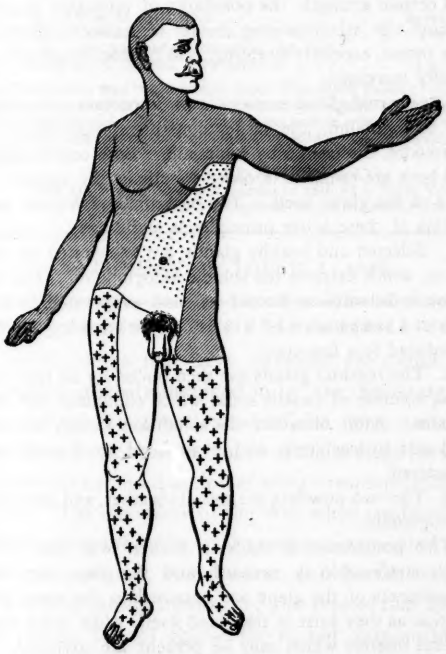

Diagram showing the areas of analgesia and thermo-anesthesia in a case of syringomyelia. Shaded area: Absence of pain and heat sense. Dotted area: Diminished pain and heat sense. Crosses: Absence of heat sense only. Unshaded area: Normal.

gesia and thermo-anesthesia. Sensation has been tested several times, and I have to thank Drs. D. Moore, Jr., and George Holliday for assistance in this tedious work. The maps are, I believe, quite accurate.

Although syringomyelia is often difficult or impossible of recognition, yet when it presents the symptoms such as are seen in this patient, *vis.*, atrophy and loss of power in the muscles of the shoulder, girdle, and upper arms, trophic changes in the hands, scoliosis, and "dissociation of sensation," the diagnosis becomes plain, as much so as in any other organic disease of the cord. The "dissociation symptom," *i. e.*, the preservation of one form of sensation with the loss of one or more of the other forms, is no longer regarded as pathognomonic of syringomyelia, since its presence has been noted in

FIG. 2.

Diagram showing the areas of analgesia and thermo-anesthesia in a case of syringomyelia. Shaded area: Absence of pain and heat sense. Dotted area: Diminished pain and heat sense. Crosses: Absence of heat sense only. Unshaded area: Normal.

neuritis, hysteria, and myelitis. It must still be looked upon, however, as one of the most significant symptoms of syringomyelia, and its presence should always suggest the possibility of this affection.

THERAPEUTIC NOTES.

Recognition of a Deep Diverticulum of the Esophagus.—REITZENSTEIN (*Centralbl. f. Chir.*, July 16, 1898) mentions the following means of diagnosis of a deep-seated large diverticulum of the esophagus, according to observations made upon a patient: (1) An obstruction to the passage of the sound which does not yield even after the tip of the sound has pressed against it for some time. (2) The chemical examination of the contents of the pouch will show an absence of ferments and free hydrochloric acid, and the presence of organic acids. It may also be possible to obtain from the diverticulum portions of a previous meal, while the last food swallowed has passed smoothly into the stomach. (3) In order to make a differential diagnosis between an idiopathic dilatation and a deep-seated diverticulum, it is necessary to pass into the stomach a sound whose sides are fenestrated

high enough to reach the diverticulum. If a second sound is passed and water poured into it, it will siphon off the whole of the water in case of a diverticulum, while if a diffuse dilatation be present not a drop will return. (4) If different colored fluids are used in two hollow sounds passed the one into the diverticulum and the other into the stomach, the second fluid will remain quite distinct. (5) Illumination by means of Einhorn's incandescent lamp. (6) Skiascopy after a fluid containing bismuth has been swallowed, or after the introduction of a sound filled with shot or powdered lead. (7) In many cases the sound of fluids rushing through is plainly distinguishable. (8) If a small solid sound whose tip has been wrapped with sticking-plaster be introduced into the stomach, and a colored fluid be poured into a second and hollow sound which reaches the diverticulum, the plaster will be colored if a diffuse dilatation is present, but not if there is a diverticulum.

Treatment of Gonorrheal Epididymitis with Ice.—UNNA (*Monatsh. f. prakt. Dermatol.*, August 1, 1898) says that for patients who can afford the necessary rest in bed, no treatment will so quickly and so surely relieve the pain and swelling of an acute or a chronic gonorrheal epididymitis as the constant application of ice. The principle involved is the expulsion of the exudate by the stimulation of the dartos muscle to its utmost power of contraction, and hence, the application of the ice must be thorough. The simple cooling of the skin will not suffice. For the correct carrying out of this treatment it is only necessary to provide several pounds of ice daily, a fairly large ice cap, a half yard of water-proof material, and a hoop. If it is not possible to keep the patient in bed constantly, considerable progress toward recovery may be made if the ice is applied at night only. Instruction should be given in the preservation of the ice, which will melt rapidly if it is not kept dry. The simplest method is to place a coarse cloth over a pail and to lay the ice upon it, covering it with a thick woolen cloth. The patient should lie upon a folded towel, the ends of which are to be brought up over his thighs, drawn tight, and fastened with a safety-pin. Upon the bridge thus made is laid the water-proof, and upon it the scrotum entirely wrapped about with the ice-bag. The latter should be filled only half full of medium-sized pieces of ice. So that it may readily fit the scrotum, a cloth wet with acetate-of-lead solution, and placed between the scrotum and ice-bag is grateful to the patient, and serves to distribute the cold equally. The hoop, fastened on either side of the bed keeps the clothing sufficiently elevated to allow evaporation, and prevents the rapid melting of the ice bythe warm bed-clothing. By these simple measures the absorption of large exudates may be accomplished in a short time, and the patients cannot say enough of the comfort which the ice gives them.

If the ice is applied at night only, the scrotum should be wrapped daily in either waste gauze or should be bandaged with compression, or it may be simply painted with a ten-per-cent. ichthyol collodion.

This treatment with ice is beneficial, not only in inflammatory conditions, but in others in which the dartos is weak. Thus nervous patients or those with varicocele may use it at night with good effect, and its tendency is to promote sleep rather than to disturb it.

Treatment of Obesity by a New Preparation of the Thyroid Gland.—MACLENNAN (*Brit. Med. Jour.*, July 9, 1898) gives rules for the preparation of a new product of the thyroid gland, which, according to the reports of cases which accompany the article, may be used in the cure of obesity with greater certainty and safety than has been the case with the preparations of the thyroid gland hitherto on the market. The difference in the symptoms produced by the use of thyroid remedies by different persons is due probably less to their individual peculiarities than a difference in the preparations themselves. If one can have, therefore, a standard preparation of a known and certain strength, the possibility of reduction in flesh without the accompanying danger of sickness, diarrhea, sore throat, excessive sweating, and cardiac failure will be greatly increased.

The thyroid gland contains two important principles: one iodoglobulin, the larger constituent, and the other thyroiodin, discovered by Baumann. Both contain iodin, and both are requisite in order to obtain the specific effects of the gland itself. The best method for the separation of these active principles is as follows:

1. Selected and healthy glands are macerated in cold water, which extracts the soluble iodoglobulin. The solution is decanted or filtered off, and evaporated to dryness at a temperature of 212° F. The resulting powder is reduced to a fine state.

2. The residual glands are then boiled for an hour in a weak solution of caustic soda, which eliminates the thyroiodin. After filtration the solution is exactly neutralized with hydrochloric acid, evaporated to dryness, and powdered.

3. The two powders are mixed together, and constitute thyroglandin.

This preparation is made in such a way that thorough sterilization is secured, and the two important constituents of the gland are obtained in the same proportion as they exist in the gland itself, while other deleterious matters which may be present are excluded. If kept dry thyroglandin will retain its properties indefinitely without deterioration. It may be administered in capsules or tablets, in doses of 3 to 5 grains, such a dose being equal to half a gland of average weight.

Eudoxin in Intestinal Inflammations.—DR. SCHONLADNIEWSKI in the *Wiener Medicinische Presse* recommends in children from two to seven years of age, eudoxin in 3- to 6-grain doses for follicular enteritis, dysentery, and sub-acute, chronic intestinal catarrh.

Ointment for Pruritus.—

℞ Plumbi acetatis . . . gr. viii
Cocain hydrochloratis . . . gr. xii
Vaselini alb. . . . . ʒ ss.

M. Ft. ungt. Sig. External use.

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SATURDAY, OCTOBER 1, 1898.

WHAT CONSTITUTES RESPONSIBILITY?

THE incidents that have attended the rounds of inspection recently indulged in by the Secretary of War and the Surgeon-General of the Army are calculated to awaken in the mind of the average person a somewhat confused notion of what "responsibility" means. The Secretary of the War when confronted with the charge that the quartermasters appointed by him are negligent, incompetent, and brutal, waves his hands in saintly innocence, and replies that he is very sorry, but of course he is not responsible. Well, here is a quartermaster upon whom the hospital surgeon, at a time of great sickness in the command (there being two thousand patients in the hospital), made a requisition for twelve fever thermometers, an instrument absolutely essential to the accurate diagnosis of typhoid fever. The answer comes back, "You're a chump," or something of that nature. "If you had asked for two I might have got you one." And this man cannot be disciplined or dismissed for he is responsible to nothing, except perhaps the wind, or the air, or his own sweet will. Neither is the Secretary of War responsible. With him this is not a world of responsibility. Events that happen here, even in the Quartermaster's or Commissary departments, are beyond the pale of human accountability.

Discovery is finally made, in this round of inquiry, that the medical officer in charge of the largest of all the volunteer camps, that of Camp Thomas at Chickamauga, at one time containing sixty thousand men, is a veterinary surgeon, who apparently knows nothing about sanitation or hygiene, and whose ambition has been to have a great division hospital where he should have personal supervision, and for which he should receive great personal credit. In pursuance of this plan regimental hospitals had been abolished, and two of the three surgeons constituting the staff of each regiment had been detached therefrom and ordered to the division hospital.

The result was that the surgeon left with the regiment (usually the second assistant-surgeon) had more work than he could possibly do in attending to the daily sick-list. The sanitation of the camp was neglected, filth and infection abounded, sickness multiplied, typhoid fever permeated the kitchen as well as the sinks, and the camp became simply a great source of supply to feed the hospitals with patients. In the meantime the hospital and regimental surgeons are being berated and denounced by the division commanders as incompetent and neglectful.

In this stage of affairs the question naturally arises, who placed a veterinary surgeon in supreme command of the medical and surgical department of the camp? The Surgeon-General answers that he approved and signed his application but that when he did so he did not know that he was a veterinary surgeon and, *therefore*, is not responsible. The Secretary of War on the other hand *does know* that Dr. Huidekoper came to him with the approval of the Surgeon-General and therefore *he* is not responsible.

Will these authorities at Washington be good enough to tell us what their acceptation of "responsibility" is?

RECENT VIEWS ON THE PHYSIOLOGIC FUNCTION OF THE THYROID GLAND.

THE function of the normal thyroid gland, the causes of the symptoms which develop in goiter, and the action of thyroid extracts upon healthy and diseased individuals are far from being well understood. Munk in a paper recently published in *Vir-*

chow's Archiv, maintains the position long since advocated by him, that the thyroid is an organ of secondary importance, and that the deaths and severe symptoms which follow its removal are not due to the lack of its secretion, whatever that may be, but to nervous disorder produced by the operation. He therefore looks upon iodothyrin as a substance which is not essential to the body. He reaffirms these conclusions from experiments which have recently been performed. Many animals recover after removal of the thyroid and continue in apparently perfect health. It is true that many of those experimented upon died, some of them after exhibiting symptoms of tetanus in varying degree; but these symptoms also developed after thyroidectomy in some animals having accessory thyroids which were not removed. Indeed, the results which follow the removal of the thyroid in animals are so varied that it is difficult to draw any general conclusion from them. Munk was unable to produce any effect whatever by introducing the thyroid gland into animals upon whom thyroidectomy had been performed, and he explains experiments of this sort which have been reported by others as errors of observation. While admitting that the removal of the thyroid gland predisposes to tetanus and is, therefore, a dangerous operation, he denies that the thyroid is in itself essential to life. Death often follows the removal of a thyroid which is functionally useless and may indeed occur during the operation. Under these circumstances it can scarcely be occasioned by the deprivation of thyroid secretion.

Some experiments by Exner point in the same direction. He found that removal of one-half of the thyroid in cats produced tetany provided the superior and inferior laryngeal nerves of the opposite side were divided, either at the time of operation or soon afterward. The same result followed division of these nerves upon both sides without removal of the thyroid gland. In the animals treated in this manner there was no change in the normal amount of iodin present in the thyroid gland, at least up to a period of two weeks after the date of operation. Exner, therefore, regarded the symptoms which follow thyroidectomy as having a neurotic rather than a secretory genesis.

In marked contrast to the modestly indefinite views of these authors are the theories advanced by De Cyon. He states that the action of the thyroid gland is to convert the salts of iodin which are present in the blood into iodothyrin. The former are depressors of the heart, while the latter is a stimulator; hence, the heart is able by means of the connection through the laryngeal nerves, to regulate the activity of the thyroid gland and thus indirectly to control its own action. The thyroid gland also protects the central nervous system against too great pressure by offering, when its vessels are dilated, sluiceways for the surplus blood. This action is also under control of the heart.

Some experiments by Berard in thyroid fever are interesting in this connection. He found it present in twenty-one out of thirty cases after thyroidectomy. The general characteristics were as follows: On the evening after operation, or perhaps on the following day, there was a sudden rise of temperature to 102° to 104° F. This continued with regular morning remissions for eight or ten days, when by crisis or lysis the temperature curve returned to normal. The general condition often did not correspond to the amount of fever. Sometimes the pulse was 110, the respiration 30, with an increased perspiration, trembling, and a feeling of heat, so that the general picture was not that of a severe infection, but rather that of an intoxication due to a temporary excess of the products of the gland in the blood. Glycerin extracts of hypertrophied thyroid gland were injected into the veins of seven rabbits and produced fever, rapidity of pulse and respiration, diarrhea, contractions in the palms, and increased reflexes. Normal thyroids, when injected, produced an increase of temperature but no other symptoms, so that apparently a hypertrophied thyroid gland secretes abnormally toxic substances.

Magnus-Levy discusses in the *Zeitschrift für klinische Medicin* the effect of thyroid extracts upon the metabolism. He found that thyro-iodin has a much more powerful influence upon the metabolism than the inorganic salts of iodin. Its influence is not exerted upon every one whether sick or well. It reduces weight by a loss of water and albumen, and also by a true destruction of fatty tissue. This is, however, of the nature of poison and on this account and because complications of a nervous character are often associated with reduction in weight the writer thinks that the thyroid cure for obesity is unwise.

ECHOES AND NEWS.

Health of the Troops in Porto Rico.—The sickness in the army of occupation at Porto Rico is still increasing. The latest reports announced that there were 2500 soldiers under treatment. Typhoid fever and malaria are the prevalent diseases.

Yellow Fever in the South.—At Franklin, La., the total number of cases reported by the Marine Hospital Service up to September 13th was forty-two, with two deaths. At Jacksonville, Miss., September 10th one case; at Orwood, Miss., from July 30th to September 6th, forty-one cases with no deaths.

Cornell University Medical School.— The opening exercises of this institution will be held in the amphitheater of the college building, Tuesday evening, October 4th, beginning at 8 o'clock. An address will be delivered by President Schurman of the University and by Dr. Polk, dean of the faculty.

New York Polyclinic Medical School and Hospital.—The winter session of this institution began September 15th. The faculty and staff are meeting their appointments with their usual promptness and regularity, and the number of students already in attendance gives promise of a most successful winter.

Dr. Senn's Panacea for Military Shortcomings.—The most flagrant fault had its seat in the dependence of the medical department upon the quartermaster and his men. The medical department must have its own lighters, its own transports, its own mules and wagons. The entire system as now used must be revolutionized. As the first step, the Surgeon-General should be elevated to a Major-General's rank and pay.

Sickness in the Philippine Army.—The 13th Minnesota Regiment which is stationed at Manila has forty-five men on the sick-list. Three privates belonging to that regiment died during the week ending September 22d. General Babcock, who arrived at San Francisco September 22d on the steamship "China" from Manila, says that the Spanish soldiers of Manila are quartered in the cathedrals and churches; the Philippinos wherever they can find space. All of our soldiers are in the barracks and well cared for.

Smallpox at Put-in-Bay.—About the middle of August smallpox developed among the servants at the Victory Hotel at Put-in-Bay, Ohio. The Marine Hospital Service reports that up to September 6th there had been twenty-six cases, twenty-one of the patients being negroes. Most of the negroes came to the hotel from Asheville, North Carolina, and undoubtedly brought the disease with them. This outbreak is evidently a side issue of the somewhat general epidemic of smallpox throughout the Southern and Southwestern States.

Medical Services at Auction.—The Bingly (England) local board is obliged by law to have a medical officer of health. Quality with them does not count; the price is everything. Accordingly it has issued an advertisement, the form of which leads to the inference that the man who places the lowest money value upon his services will be selected for the position. The officers of that community must certainly have strange ideas regarding the commonest courtesy due to members of a learned profession, for certainly nothing could be more insulting to the medical profession.

Red-Cross Work Commended at Jacksonville, Florida.—Each day the Red Cross gives 50 gallons of milk, 2000 pounds of ice, and 30 dozen of eggs. Besides this it has built store-houses, floored the tents, given hundreds of night-shirts, pajamas, pillows, sheets, buckets, bedpans, and dozens of other articles necessary for the care of the sick. In military channels the stream of supplies flows slowly and with many stops and much formality, but Dr. Kent, who represents the Red Cross at Jacksonville, gives freely and without delay. He has no regulation that prescribes how many bedpans one division must use, but gives all that are needed.

Casualties in the Soudan Expedition.—In the recent fight at Omdurman there were 4 officers killed, 3 English and 1 native, as well as 23 men in the British regiments and 20 in the native. There were 14 British officers wounded, and 8 native officers. The wounded in the British regiments numbered 99, and in the native regiments 221, so that the total number lost in this battle—in which the enemy lost some 15,000 in killed and wounded—was 389. Lieutenant-Colonel Hoggett, senior medical officer of the expedition, received a bullet wound of the left breast, and 2 men of the corps were wounded, one of them severely, by a bullet in the head.

Responsibility for the Hospital Surgeons and Their Work.— General Breckenridge recently submitted the direct question to General Sternberg as to who had the right to command the hospital surgeons, saying that, at Chickamauga, these individuals were a sort of do-as-you-please fellows under nobody's command. The same condition existed at the new quarters at Camp Hamilton. General Sternberg replied that the surgeons were subject to the orders of the division commanders; that it was the latter's business to know this and secure obedience. The surgeons had maintained that they were responsible only to Surgeon-General Sternberg.

Medical Practice in South Africa.—The correspondent of the *Münchener Medicinische Wochenschrift* writes that the number of doctors is increasing out of all proportion to the population. The expenses of living are also on the increase. It is high time, therefore, to warn some of our younger brethren who are anxious to make their fortunes in as short a time as possible that Africa does not hold out the golden palm as in days of yore. There seems to be unlimited scope for the unqualified practitioner. Johannesburg appears to be overstocked with "doctors," the majority of whom have had no medical education whatever; these satisfy their consciences by buying diplomas on the spot. A license to practise is given to any one who pays $100.

The Soudan Expedition.—The *British Medical Journal*, in commenting upon the success of the Soudan Expedition under Sir Herbert Kitchener, remarks that the most difficult part of the advance was over long before the two forces stood face to face. The great merit of the Commander and of his staff has been the frank recognition of the necessity for forming a true estimate of the risks to health involved in moving a large force for so great a distance under a trying climate and under local conditions as to the water-supply and camp grounds, which rendered it imperative that every move should be regulated by sanitary requirements. The success of the advance reflects the greatest credit on the medical officers who have advised on these points and upon the Sirdar (Kitchener) who has known how to value and accept their advice.

More Sick Soldiers from Cuba —When the "Vigilancia" arrived about three weeks ago at Montauk she reported that she brought the last of the sick from Siboney and Santiago, but on September 21st there arrived unheralded at Montauk the transport "Segurança," having on board forty men in good condition and thirty-five ill. One of them was a yellow-fever patient. This transport announced also that she brought the last of the sick. Four hours later the transport "Mexico" arrived and made the same statement regarding herself. She brought seventy-six men of Troop M., 10th Cavalry, and eighteen sick. Both transports were ordered immediately to New York quarantine. There the yellow-fever patient was placed in the hospital at Swinburne Island, and all the other passengers on Hoffman Island for disinfection and detention. The yellow-fever patient has since died.

Surgeon-Major Pinches.—The following incident is told of Surgeon-Major Pinches, who was attached to the 21st Lancers in the Soudan campaign. Out of a total strength of 320 men with which the regiment went into the battle at Omdurman no fewer than 40 were killed and wounded. Several horses were quickly hamstrung and their riders were promptly cut to pieces by the ferocious foe. With but one exception no man who was once actually unhorsed was again seen alive. This man was Surgeon-Major Pinches. His horse was brought to the ground and the officer fell among the furious dervishes. Sergeant-Major Brennan, who was riding ahead, saw the Major's peril and gallantly returned to his assistance. After a tough fight, in the course of which several dervishes lost their lives, Brennan succeeded in getting the officer on to his own horse and back to the regiment.

Facts Concerning Dr. Huidekoper. — One who knows writes us as follows: As a young fellow, Dr. Huidekoper had a good training and was one of the junior surgeons at the University of Pennsylvania, with fine prospects. Pepper induced him to go to Alfort, where he spent three years at the veterinary school. Returning, he organized the Veterinary Department of the University of Pennsylvania. Though he gave up his medical practice, he always mixed with medical men, and he was surgeon to the City Troop, and for many years in the National Guards, where he had excellent opportunities for knowing the routine of camp organization. It is very unjust to speak of him as an obscure veterinary surgeon, for few men in this country have done more to promote its highest interests, and I know personally the character of the work he did in Philadelphia, and the self-sacrificing way in which he labored for the school. I do not defend his appointment, but we should be just to him.

The Medical Club of Berlin.—Dr. J. M. Winfield writes to the *Brooklyn Medical Journal* concerning the above named medico-social undertaking at the German capital. "The men who have inaugurated this club have brought out a very unique thing. They have a number of rooms furnished and equipped in club style. Meals are served to members, and all visiting doctors from any part of the world are invited to visit and use the club as their headquarters when in the city. Some of the waiters speak English, so an English-speaking doctor can always feel at home. In addition to the restaurant, card- and billiard-rooms, they have a spacious reading-room and library, where all of the medical journals of the world are kept on file. The president is Dr. Lesser, one of the best-known professors at the University. The medical men in Berlin are very anxious to make the club a success, especially for foreign visiting physicians. It costs for visiting members three marks per month, less by the year."

The Regimental Hospitals Restored at Camp Poland, Lexington, Ky.—Under the administration of Colonel Huidekoper, the veterinary surgeon who had charge of Camp Thomas at Chickamauga, all of the regimental hospitals were abolished and all of the sick of the entire army of 60,000 men were transferred to the division hospitals so that they could be under the immediate supervision of Colonel Huidekoper. Upon the recent visit of Secretary Alger and General Sternberg to this camp Colonels Gardner, Kuert, Lawton, Shuble, and Young, and Major Schaffer objected strongly to the abolition of regimental hospitals, and Surgeon-General Sternberg directed that these should be restored. Colonel Huidekoper accompanied the troops from Chickamauga to Porto Rico, and against the strong opposition of the regimental commanders insisted on applying his system there, abolishing regimental hospitals and forcing all the sick into a division hospital, where, as Colonel Huidekoper said, it enabled him to keep all the sick under his personal supervision.

Deaths under Anesthesia.—Two deaths near Birmingham, England, during the administration of anesthetics have recently been reported. One was that of a boy aged fifteen years who died under chloroform while undergoing an operation on a diseased hip-joint. Chloroform was administered in a modified Junker's inhaler; only 80 minims were given, the operation lasting twenty-five minutes. Previous examination showed no contra-indication to the use of chloroform. Post-mortem revealed a normal but contracted heart. In the second

case the patient was a woman, aged thirty-nine years, suffering from cancer. The anesthetic was a mixture of chloroform and ether. Preliminary examination failed to disclose any contraindication to the anesthetic. On post-mortem a flabby, fatty heart was discovered. The patient died in the first stages of the anesthetic before the operation was begun. A third instance of death under anesthesia is reported from Liverpool. The patient was a workman aged twenty-eight years, who was about to be submitted to an operation for the repair of a crushed hand. Autopsy revealed no sufficient cause for the fatal termination.

The President's Investigation Commission.—This commission began its regular sittings on Saturday. September 24th. Many of the men selected to serve upon it have declined but those who have undertaken the work are the following: Major-General Grenville M. Dodge of New York; Colonel J. A. Sexton of Illinois; Captain E. P. Howell of Georgia; Major-General J. M. Wilson, Chief of Engineers of the United States Army; Charles Denby of Indiana, former Minister to China, former Governor of Vermont; former Governor James A. Beaver of Pennsylvania; Major-General Alexander McD. McCook, U. S. A., retired, and Dr. Phineas D. Connor of Cincinnati, Ohio. It is thought that the commission will make its first inquiries in the Secretary's office, the Adjutant-General's office, and the office of the Major-General commanding the army, taking cognizance of the orders which were issued for the conduct of the war and the instructions given to the army. In the same manner the offices of the Surgeon-General, Quartermaster-General, and Commissary-General will be examined into to ascertain the character of the orders issued, and whether they were carried out. It is not known whether the commission will visit the camps, but it is thought probable that such journeys will be made.

Some Camp Thomas Items.—One of the surgeons at Camp Thomas says he made a requisition for two dozen fever thermometers with which to take the temperature of a large number of sick soldiers. The curt reply came back from an official upstart: "If you had made requisition for two thermometers, instead of two dozen, we would have tried to get one for you." It was not until General Breckenridge took command at the camp that lime was used to disinfect the sinks that had made Chickamauga Park a breeding-place for malaria and typhoid fever. There was a great lack of good drinking-water for several weeks. Several nurses testified before Major Ward and his associates that no orders were issued to wash the sick men, and there were no conveniences furnished for their washing. And so they suffered, and in many cases died in conditions too horrible to describe, outside of a medical journal. The hospitals lent new horrors to death. Many who perished would probably have suffered less had they been left to die in the open air under the shade of the trees. . . . It seems incredible that in this land of plenty scores of fever-stricken soldiers at Camp Thomas should die without being supplied with the ice and milk for which they pathetically pleaded. Yet there is sworn testimony to this awful fact. Speaking of this matter, a leading citizen of Chattanooga said to me: "This is a great milk country about here. There are cows enough in this section to supply milk for an army in addition to the men who craved for it in the camp hospitals. There are two artificial ice-plants at Chattanooga that could have been purchased by the Government, and could have been made to turn out more ice than the hospitals needed."—*Brooklyn Eagle.*

CORRESPONDENCE.

A PREVALENT METHOD OF INFECTION AMONG CHILDREN.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—In the wonderful progress of the science and practice of hygiene that has come about during the last ten years, it seems strange that such a ready method of infection, as is furnished by children when transferring already salivated foodstuffs from one mouth to another, should escape scrutiny, comment, and condemnation. This filthy and positively dangerous habit, though innocently practised is a matter of paramount importance and demands more than passing attention.

This evil, the effects of which are highly detrimental, cannot be abolished till the public attention and fear are aroused by impressing on their minds the positive dangers connected therewith. Mothers must strenuously oppose the injurious habits of their children eating from other children's mouths. Further, in schools, and especially in the playgrounds where this innocent vice is practised to its fullest extent, teachers should be on the alert to reprimand such victims. Is it too much to ask that the "Board of Health" shall at once take decisive steps for the prevention of this pernicious vice?

MAURICE MINTON, M.D.,
39 MONTGOMERY STREET, NEW YORK, September 26, 1898.

VOLUNTEER OFFICERS AND THEIR MEN.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—I beg to inquire if your attention has been called to the comparatively low rates of sickness and death (except in battle) that appear to have been incident to our officers of volunteers who have returned to us from both the conquered Spanish territory and from the camps at the South? The terrible losses and suffering that have, in so many places, befallen the private troops have apparently given their officers the go-by. I say "apparently" for the reason there has as yet been published no official statement that would enable us to form an exact opinion. I have had this subject before my mind for some time past and have formed an opinion, from what I have read, that not only has sickness and loss been proportionately less severe among volunteer officers than among their men, but also among the officers of regulars.

I trust that some trustworthy research may be made, officially or otherwise, to throw light on these apparently different loss-rates for different classes of men, and inci-

dentally to give information as to the dietary of officers and men while at the front and at the instruction camps. This research may result in bringing to light some very selfish conduct on the part of the officers, if the truth is ever brought out from a class of men who are very slow to make complaint. I chanced to overhear a trolley-car conversation turning upon the conduct of many of the officers of the 71st New York Volunteers, that made it plain that the boys of that regiment were imposed upon by their officers at every opportunity, and further, that there is a day of reckoning to come for those who maltreated their men. LUX.

Brooklyn, September 19, 1898.

[This fact has evoked frequent comment on the return of the various regiments, not only from Cuba but also from the volunteer camps. The lack of consideration shown their men by some volunteer officers was depicted in the "Pen-pictures of Camp Wikoff" published in the MEDICAL NEWS September 10th. This charge suggests a very proper field for official investigation.—ED.]

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

REQUIREMENTS OF PRELIMINARY EDUCATION AND MORE RIGID MEDICAL EXAMINATIONS—HOSPITAL BEQUESTS—PERSONAL NOTES—HOSPITAL NOTES—PHILADELPHIA COUNTY MEDICAL SOCIETY MEETING—HEALTH STATISTICS.

PHILADELPHIA, September 28, 1898.

THERE is some little speculation as to how the law requiring "a competent common-school education" as preliminary to the study of medicine is to be interpreted, and a commission appointed from members of the public-school boards to hold these examinations will probably have some difficult problems to solve, and the enormous and constantly increasing number of matriculates at the medical schools demands more care in this matter and a more rigid system of examinations by the State.

Dr. Henry Beates, Jr., a member of the State Medical Examining Board and an ardent worker for a high standard, furnished the following examples as illustrative of material which frequently comes before the board, the questions and answers here given being verbatim copies of some sample answers in the examinations of applicants for a license to practise medicine in this State:

Question: "Describe the functions of the capillaries."

Answers: "They carry the air and blood through the tissues and organs." "Carry nutrition, oxygen; carry away waist-products; assist in radiation. They give a rich blood-supply to the parts. They carry red and white blood-corpuscles to build up injuries; carry off waist-products, and is in generaling the temperature of body by their power of contractility." "To supply nourishment to the superficial surfaces of the skin, and to assist in carrying oxygen to the lungs."

Question: "Give the origins of normal fat in the human body, and name examples of the types of food from which it is elaborated."

Answers: (1) "Due to imgration of fat cells and blood-corpuscles. (2) Meats, sugar starches." "The circulation and lymphatics along with the starches. Animal foods." "In liver fat; is found normally of long bones from meat. Hydrocarbons and carbohydrates. Fat and oils from liver substance its self."

Question: "Describe the pathological changes in senile gangrene."

Answer: "The tissue undergo changes by the extravasation of leucycites and cellerlar tissue change, which causes death to the part."

Question: "Summarize the function of sweating, and explain the office of each physiological factor concerned."

Answer: "The function of sweating are, the kidneys which carry of the sweat which is not gotten rid of through the skin the pores are also means of getting rid of the sweat, and it is also absorbed by the hair follicles."

Question: "Name each anatomical structure involved and describe the changes occurring in tubercular arthritis."

Answer: "The lungs become involved when the tubercle is contracted it involves the spleen, becomes congested, the liver being inflamed."

Question: "Describe metabolism."

Answer: "Metabolism is a system of waste and repair; it is constructive and distructive, it influences heat, light, moisture, and electricity."

Question: "Describe the pathological changes in acute yellow atrophy."

Answer: "There is fatty degeneration and escapement of cellular elements."

Question: "Describe the pathological conditions present in peritonitis."

Answer: "There is hyperemia of the serious membrane the capillaries distended and occasional extravasation of blood from the rupture, the normal secretion is arrested, the shinney membrane becomes dull and opaque from exudation of pure fibrin which is adhesive glueing the parts together this is adhesive peritonitis if it goses on the effusion of serious fluid is poured into peritoneal cavity it is called exudative."

Question: "Name and describe the various forms of white cells of the blood; methods of differentiation, and their pathological significance."

Answer: "they are diferented by the microscope the one will be a white cell while the other will be a white cell with a small round dot either in the center or at the sides which can be distinctly made out. they are the scavengers of the body and they will try to kill bacteria which enter the body for instance if you have a wound they will flock there and battle with the bacteria and die and raise a monument and the monument will be the scab.

"P. S. These cells are called the leucocytes, microcytes."

Another answer was: "I know of but one kind of white blood-cell although they change their form very much and afterward assume their round shape again unless distroyed by the function which they have had to perform. Their significance might be determined by the aid of the microscope for as their function is to act as guardians and

scavingers it might be determined finding out what they may be trying to dispose of."

By the will of the late Catherine Thorn the following bequests are made: To the Episcopal and Pennsylvania Hospitals $5000 each in memory of her husband and brother respectively, and to the Home for Incurables $3000.

Dr. Keen returned from Europe last week and immediately went to Washington to confer with the President about the War Inquiry Commission on which he finally determined not to serve. Dr. Emil Dippel, who was so severely blood-poisoned early in the summer, has resigned from St. Timothy's Hospital.

Dr. John B. Robert's resignation as President of the Philadelphia Polyclinic and College for Graduates in Medicine has been accepted with regrets by the Board of Trustees.

Dr. Gans, Assistant Surgeon of the Twentieth Pennsylvania Infantry, has been appointed Medical Director of a hospital for convalescent soldiers, established by the Pennsylvania Women's Emergency Relief Association, with Dr. M. V. Leaf as assistant.

Dr. Hare held the first medical clinic at Jefferson Hospital last Monday and Drs. Hearn and J. Chalmers Da Costa, surgical clinics.

Of the 1550 sick soldiers received at the different hospitals throughout the city, 365 have been discharged and 24 have died, a mortality thus far of 1.6 per cent.

The remodeled laboratories of Jefferson Medical College are almost completed and will be occupied the first of next month, while the new college building is so far advanced as to leave no doubt of its completion by June, 1899, the time specified in the contract.

The daily papers last week published the fact that gangrene of the skin had appeared among the convalescent soldiers in St. Agnes' Hospital. Dr. B. Franklin Stahl of St. Agnes' ascribes it to the inconceivable weakness of the soldiers' blood and consequent malnutrition, a condition difficult to overcome in typhoid convalescents. Two deaths have already occurred.

The Philadelphia County Medical Society held its first fall meeting September 14th, papers being read by Dr. Roberts, who reported three cases showing "The Necessity for Early Operative Interference in Intestinal Obstruction," and by Dr. S. Solis-Cohen, whose paper on the "Treatment of Exophthalmic Goiter with Suprarenal Substance" was discussed by Dr. J. Coles Brick and Dr. J. Chalmers Da Costa.

The total number of deaths for the week ending September 23rd, as reported at the health office was 376, of which 120 were in children under five years of age. The total number of contagious diseases reported was 480, as follows: Diphtheria, 99 cases with 17 deaths; scarlet fever, 15 cases with 2 death; typhoid fever, 366 cases with 15 deaths.

Application for Bites of Insects.—

℞ Aq. ammonii fort. . . . . gtt. xl
Ac. salicylici . . . . . gr. v
Collodii . . . . . *m.* xlv.
M. Sig. External use.

OUR FOREIGN LETTER.

[From Our Special Correspondent.]

GERMAN MEDICAL SCHOOLS AND THE INVASION OF SPECIALISM — A SPECIAL APPLICATION OF THE ELECTIVE SYSTEM IN MEDICAL WORK — WANDERJAHRE IN MEDICINE AND OPPORTUNITIES AFFORDED—POSSIBILITIES OF THE SYSTEM IN AMERICA.

Berlin, September 18, 1898.

About the time this reaches you American medical students will be finding their way back to the medical schools for the year's work. German medical students will not begin the semestral work until after November 1st. Meantime October, in many of the German university towns, and especially here at Berlin, is taken up by a series of special vacation courses, attended by recent graduates and medical undergraduates who are entering on their final semesters. The specialism of modern practice invades the sacred domain of even a German university medical career. The protest voiced so forcibly by Professor Von Jaksch at the German Medical Congress at Wiesbaden in the spring, during the discussion of the clinical aspects of medical education, was echoed by distinguished German professors, who had scented the danger, too, but courses in the specialties are of too intensely practical interest to the student, who looks forward to practice shortly after graduation, to permit them to be neglected for the sake of the supposed firm foundation afforded by nine semesters of exclusive application to the principles of general medicine and surgery. It is not alone in the vacation courses but also in the regular university courses that the invasion of specialism even in student days is noticed and its satisfactory limitation is evidently going to constitute one of the serious medical educational problems of the Twentieth Century.

Meantime there is a very common custom among the German students that protects them more than is usually the case from the seductions of premature specialism and lends an added interest to the study of the fundamental principles and the cognate sciences that constitute the important groundwork for a medical education. Very few German medical students take all of their medical courses at the same university. Very often the first semesters are passed at one, often at several of the smaller universities, the last semesters being taken at one of the larger universities, situated in a large town, and so supplied with abundant clinical material for the important practical work of the final medical courses.

The method is, of course, entirely unfamiliar in America and at first only its disadvantages may be evident. It might seem that a much more full and rounded course would be obtained by constant attendance at one university where special attention had been given to the arrangement of the different subjects properly in various years, than by attendance at various universities whose courses have been arranged without reference to each other. This objection would be truer in America than it is in Germany, where all the universities are government institutions, and where all the teaching methods are modeled, as far as practicable, after a common plan. Even in the best medical schools of the United States,

however, it is probable that very little of importance would be missed if the different years were passed at different schools.

The method enables the German medical student to become personally familiar with the great makers of medicine in the various lines of medical thought and at the same time to learn something of the spirit of various German univerities. For, though all recast in the modern mold of present-day government university regulations, German universities have an individual spirit, the outcome of centuries of tradition in many cases, that is essentially distinctive. The broadening influence of this familiarity with men and cities, with methods and manners, can scarcely be overestimated, and it represents a factor in the educational formation provided by German universities that must always be reckoned upon if we are to estimate fairly the development they set in action.

Many, of course, and varied are the motives that impel students to the selection of certain universities for certain semesters. Those who are especially interested in anatomy, histology, and embryology may elect to pass their semesters in these branches at Berlin because in these subjects Waldeyer and Hertwig are names to conjure with. Those who are interested in practical physiology and its applications to clinical medicine pass a semester under Landois at Greifswald. Von Recklinghausen at Strassburg, Orth at Gottingen, Grawitz at Greifswald draw students who are or hope to be specially interested in pathology. Heidelberg gets certain medical students who are interested in surgery or nervous diseases because Czerny and Erb are there. Those who see a great future in clinical medicine for physiological chemistry, scarcely fail to pass at least a semester at Strassburg, where Winkowsky is doing such practical work in physiology and Naunyn is showing the practical application of physiological chemical principles to metabolism in health and disease.

We might continue the enumeration until the list of great German workers in medicine was exhausted. The names became familiar to German medical students very soon because there is from the beginning the question as to which teacher should be selected as the master in special branches. The very fact of having in a way to learn various men's views, to look over their books, to inquire of fellow students as to the success of their teaching methods (for they recognize here that the great scientist may prove to be anything but a great teacher), the problem of having to size up, so to say, whose *ipse dixit* seems worth being magistral in the formative stage,—all this gives a broadness of view that in medicine especially is part of the highest training. It does not degenerate so easily into that hypercriticism of other schools and other methods in medicine that is founded on imperfect and defective knowledge of men and their principles. It cultivates, yet not too precociously nor superciliously, that liberal eclecticism that seems to constitute the best basis of modern practical medicine.

Of course German medical students are not always guided by the lofty motives of pure scientific zeal, nor the more sordid ones of practical prospective utility in their selection of certain universities for certain semesters. They may go to Marburg or to Jena because Behring or Haeckel are there; yet an additional motive may be that the corps-student spirit runs high, that there is a traditional spirit of student gaiety about the universities, celebrated in song and story, that makes one wish to have pleasant recollections, that intertwine with the storied memories that cluster around the old places and are redolent of the times when great literary or scientific genius trod paths that have become so familiar. The German student may go to Greifswald because he wishes to take a course under Mosler, most magnetic of masters, though it may only be that he hopes to find the summer semester pleasanter on the shores of the Baltic Sea. He may go to Bonn because of Pflüger's physiology, or Binz's pharmacology and therapeutics, though he may go only because it is an extremely fashionable university, where crown princes and nobles go, or it may be that he wishes to subject himself for a semester to all the subtle magic of the Rhineland and its scenery and learn to appreciate its beauties.

Even when motives as seemingly adventitious and impertinent as these play a rôle in the selection of the universities at which various semesters are to be taken the result of the university career is eminently promising. There is a wider knowledge of men and methods inevitably acquired; there is the liberalizing influence of association with what is best in German educational circles; above all, there is the obliteration of the tendency to accept routinely the dicta of any school just because they happen to be emanations from that school and without the formality of personally testing their reasonableness.

Besides these more or less impalpable but very definite advantages there is the material advantage in climatology and in hydrotherapy; of knowing in various parts of the country health-resorts, and bathing- and watering-places, not as mere names, but by actual inspection and some personal experience. On the whole, a wandering American who studies the workings of the system is inclined to think it would be a source of good in America, too. The ordinary medical graduate about to take up the routine of practice would be much better fitted for a successful career by a knowledge of the men and methods of three great medical schools than of one. He might have failed to know in his last year the exactly contradictory answers that he should have given to the two professors of practice if they both happened to ask a certain question on which they disagreed. He might not know much about a number of useless drugs that the fad of a special professor of therapeutics still insisted on keeping in the program of study, though no one, not even himself, used them. He might not know the details of the last operation invented by one of his professors of surgery, but condemned by the other. In a word, the medical graduate might not pass his examinations as well, but he would be much better prepared to begin to select his practical opinions for himself. He would have had an initiation into that all important problem for the medical man, what opinions in the midst of those that are continually being put forward are worth the while stop-

ping to consider at all, and which of them are worth trying out on their merits. The critical faculty so necessary in medicine would have been called into action and a liberality given to its special applications that would promise much for the rational application of medical principles, and would not permit its possessor to be blown about by every wind of medical doctrine that came bearing with it some supposedly great medical name. We are only entering the Twentieth Century, however, not the millennium, but let us hope for the best.

SOCIETY PROCEEDINGS.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Eleventh Annual Meeting, Held at Pittsburg, Pa., September 20, 21, and 22, 1898.

FIRST DAY—SEPTEMBER 20TH.

MORNING SESSION.

THE Association met in the assembly hall of the Monongahela House, and was called to order by the President, DR. CHARLES A. L. REED of Cincinnati, Ohio, at 10 A.M.

DR. JOHN MILTON DUFF of Pittsburg welcomed the Association on behalf of the local medical profession. Lieutenant-Governor Walter Lyon followed with a brief but very eloquent address of welcome on behalf of the citizens of Pittsburg and of the State. President Reed, on behalf of the Association, responded to these remarks of welcome in a very concise, but graceful speech.

Following the preliminary exercises came the first paper of the scientific session, by DR. FREDERICK BLUME of Allegheny, Pa., entitled

SOME OF THE COMPLICATIONS FOLLOWING HYSTERO-SALPINGO-OOPHORECTOMY IN PELVIC SUPPURATION; WITH REMARKS ON THE OBJECTIONS TO THIS OPERATION.

He said a perusal of the literature of the past few years proved that vaginal hysterectomy had made its way here and abroad. Its condemnation upon theoretical grounds had decidedly diminished. Its advantages were too plain to permit of being longer ignored. Men who, in the beginning, strongly objected or opposed this mutilating operation, as some were fond of styling it, had changed their opinions. Guided by the experience of others they had adopted this method and confirmed the assertions of its advocates that it was a conservative operation in the broadest sense of the word—a procedure which, though sacrificing the uterus, conserved the life of the patient even under circumstances where the suprapubic route would mean certain death.

The propriety of removing the uterus in suppurative disease of the appendages had been questioned ever since Péan introduced vaginal hysterectomy. Briefly stated, the chief objections were: (1) the uterus was not a useless organ after the ablation of the appendages, and should not be sacrificed unless seriously diseased. (2) Vaginal hysterectomy was an incomplete procedure, followed by serious complications and was not curative.

The disposition to preserve the uterus during the child-bearing age in women with healthy tubes and ovaries, or in unilateral suppurative pelvic disease could well be understood, but why this organ should not be removed as the initial step of a life-saving operation, when the ablation of both appendages became a necessity was beyond comprehension. The assertion that the uterus without the appendages was still an important organ; that its functions had not ceased with the artificial induction of the menopause must be rejected as untenable in the light of present knowledge. The arguments that after the extirpation of the uterus the nervous phenomena were more pronounced than when the appendages were left alone, had strongly influenced many surgeons against vaginal hysterectomy. Careful investigations, however, had shown that these arguments could not be verified. Mainzer, in a report of 200 vaginal hysterectomies for chronic inflammation of the adnexa, performed in Landau's clinic, had arrived at the conclusion that there is less disturbance of the nervous system after the radical operation than after salpingo-oophorectomy alone. He further states that the age of the patient bears no relation to the presence or absence of these nervous symptoms.

Dr. Blume does not confirm the view that the removal of the uterus increases the nervous disturbances incidental to the menopause, and he is inclined to believe that this view is based upon the complaints of neurotic women. As to the sexual passion his patients, with but one exception, state that they have as much sexual appetite now as at any time before operation. Two of them, young widows, who married a year after the operation, informed him repeatedly that they were more passionate and enjoyed sexual intercourse more than ever.

The mortality of vaginal hysterectomy was considerably less than that of the abdominal operation. There was, however, a diversity of opinion as to the ultimate results of the vaginal procedure. The essayist does not resort to the vaginal method in those cases in which there is a possibility of saving one tube and ovary, *i.e.*, in cases of unilateral suppuration even when due to gonorrhea. He is not yet convinced that both appendages must be sacrificed, far less the uterus, when gonorrheal infection is limited to one tube and ovary. His personal experience with vaginal hysterectomy for pelvic suppuration is limited to 42 cases during the years 1895, to September, 1898. This series, though small in number, was quite interesting on account of the extent and the gravity of the pathological changes. Of the 42 patients, 18 belonged to that desperate class which, if treated by the abdominal route, were either left unfinished or, according to the statements of prominent operators, had a death-rate of 25 to 30 per cent. in the hands of the most skilful surgeon. The pelvic organs were agglutinated into one mass and could not be distinguished by vaginal or rectal examination. In some instances these masses reached half way to the umbilicus; while in others the peritoneal cavity was less involved and they extended downward into the vagina, pushing the

uterus against the symphysis pubis and compressing the rectum to such an extent that an ordinary rectal tube could not be passed without difficulty. The lesions of the remaining 24 patients were not quite so extensive, yet in every instance both appendages were so far involved that a conservative operation was out of the question. Complications occurred in three cases.

DR. JOSEPH PRICE of Philadelphia said that the sexual appetite of women, alluded to by the essayist, following a variety of operative procedures, was in many instances improved rather than impaired. It was rare for a woman to complain of impaired sexual appetite after a supravaginal hysterectomy. Age, however, should be considered in discussing the nervous phenomena incident to a normal or precipitate menopause. He advocates the abdominal route, saying that the vaginal method was an incomplete one. The latter method favored bowel obstruction. Of ten vaginal hysterectomies performed by Coe in his early work, there were two deaths from intestinal obstruction.

DR. EDWIN RICKETTS of Cincinnati cited an instructive case in which it became necessary to resort to the combined method. He spoke in favor of the vaginal route in some cases, but not in all instances for pus in the pelvis.

DR. RUFUS B. HALL of Cincinnati was willing to admit that there were cases that could be dealt with by vaginal section and drainage, but the field for this operation was limited. In cases in which there were dense adhesions to the viscera good, complete work could not be done by the vagina. Experience had taught him that if a patient was under thirty-five and the uterus was removed by an abdominal operation and the cervix was left, she suffered less from reflex disturbances than she did when the uterus was left.

DR. CHARLES GREENE CUMSTON of Boston said that suppurative conditions within the pelvis demanded different treatment, according to their situation, the number of foci, their size and nature, and in making the diagnosis and considering the choice of operation, all of these things should be considered, whether the case be suitable for the vaginal or abdominal route. In most cases of pus in the pelvis, speaking in a broad sense, posterior colpotomy was a trifling operation, yet a conservative one. It could be performed in cases of chronic purulent disease of the female pelvic organs and in acute suppurations where it would be dangerous to do either abdominal or vaginal hysterectomy.

DR. JAMES F. W. ROSS of Toronto said that at the Montreal meeting of the British Medical Association vaginal hysterectomy for cancer was discussed, and his experience agrees with that of Price, that this operation for carcinoma, no matter how early it was done, was not satisfactory. High amputation of the cervix after the method of Byrne had been satisfactory in his hands.

DR. L. H. DUNNING of Indianapolis remarked that the character of the suppurative products encountered by the surgeon called for different lines of procedures. In the cases described by the essayist, in which the pus accumulations were exceedingly large, extending as high as the umbilicus, fixed, and extending down into the vagina, it had been his practice for the last ten years, and he saw no reason to change it, to do vaginal section. In such instances where vaginal hysterectomy was done it was exceedingly difficult, if not impossible, to remove the pus-sac. He had operated in fifty cases of the kind described by vaginal incision. Of this number, four patients returned for subsequent operation. All but one of them had made primary recoveries.

DR. B. SHERWOOD-DUNN of Boston believes the perfection of technic of hysterectomy by the vaginal route exceeds in difficulty that by the abdomen to a great degree. The complications following the vaginal route exceeded those of the abdominal method. The danger to the uterus, the bowel, and post-operative hemorrhage were very much greater by the vaginal than they were by the abdominal route. He restricted vaginal hysterectomy to a few selected cases where he was fearful of death of his patients by the suprapubic route. The vaginal operation was difficult, and in many instances it had to be followed by a second operative procedure through the abdominal wall.

DR. W. E. B. DAVIS of Birmingham holds that vaginal incision and drainage has a large field. There was a great deal of difference between operating upon old gonorrheal cases and upon fresh ones. Unquestionably all of the cases following the puerperal state, where the surgeon can place his finger upon the side or behind the uterus, could be dealt with better by the vaginal route. The surgeon made a mistake when he opened the abdomen to deal with this class of cases, when vaginal incision and drainage was such a simple procedure. While a few patients would return for secondary operations, the surgeon should be willing to operate several times, if necessary, to save important organs.

DR. C. A. L. REED of Cincinnati formerly resorted to the vaginal route, and, after trying it carefully and conscientiously in many cases, he had practically abandoned it and had returned to the abdominal incision. He had, however, a class of cases in which hysterectomy was a very important concomitant in the course of treatment, but even in these he does not remove the uterus per vaginam.

The paper was further discussed by Drs. A. B. Miller, of Syracuse, and J. Henry Carstens of Detroit.

AFTERNOON SESSION.

DR. D. TOD GILLIAM of Columbus, Ohio, contributed a paper, entitled

OPERATIVE TECHNIC FOR INTRALIGAMENTOUS OVARIAN CYSTOMA.

Prior to the enucleation method of Miner the surgical treatment of these cases was crude and incomplete. Miner's method marked a new epoch and will ever remain the foundation principle of their surgical treatment. It was, however, attended with so much difficulty and danger as to greatly abridge its usefulness. The chief danger was from hemorrhage, which was oftentimes fearful and not infrequently fatal. Other, and by no means unimportant, dangers came from injuries to important

pelvic structures while conducting a hurried and blind dissection. There is a crying need for something better. The essential factors of the ideal operation are: (1) Tapping, to reduce the volume of the cyst and to open the way for hemostasis and enucleation; (2) ligating the supply-vessels to control hemorrhage; (3) enucleation along the line of cleavage to insure easy, rapid and safe dissection. This technic was foreshadowed in a case which the essayist operated on October 30, 1894. Here he gained his first knowledge of the line of cleavage for intraligamentous cyst and reported it to the Columbus Academy of Medicine. In 1896 Kelly announced the line of cleavage for intraligamentous uterine fibroid. Hall (in 1897) was the first to combine all the essential factors of the ideal operation. Hall's method, however, included hysterectomy. The method of the essayist without hysterectomy is as follows: First tap the cyst and drain off its contents; then ligate the ovarian artery near the pelvic wall and place a clamp between the cyst wall and the uterus. Select a point as low down on the anterior wall as practicable, and with a pair of forceps lift up the capsule and make a small opening. Insinuate a finger and sweep it around, separating the cyst from its matrix at the base. Now turn the finger upward and work in the direction of least resistance, slitting the capsule as you go. This will indicate the line of cleavage and will generally run upward and outward diagonally across the face of the tumor. Now introduce the hand and strip off the capsule from below upward, following the line of cleavage. Enlarge the opening by making an incision parallel to the capsular margin; seize the cyst and roll it out of its bed, stripping it from the posterior capsular wall. Trim and suture as in other cases.

GENERAL CONSIDERATIONS ON SEPTIC INFECTION OF OVARIAN CYSTS.

DR. CHARLES GREENE CUMSTON of Boston read this paper. Inoculation experiments had shown that if the liquid contents of an ovarian cyst were not contaminated by bacteria they would remain aseptic and would undergo no change. But if, on the contrary, microbes attacked a cyst and entered it, its contents would serve as excellent culture-media and symptoms of infection would soon appear. But the human organism would take on the offensive and would react against the bacteria which had infected the cyst; leucocytes come from the walls of the vessels and attack the invading microbes, and thus we have the transformation into pus of the liquid contents.

There were two kinds of septic infection of ovarian cysts, namely, pathogenic infection and saprophytic infection. Pathogenic and saprophytic organisms often enter ovarian cysts through a puncture, incision, and drainage track. As puncture is discarded in a great number of instances by the majority of the profession, the patient contains the agent of the septic process under consideration. The germs do not come from without, but from the interior of the organism, and it may be called a true auto-infection, which takes place in one of three ways: (1) By means of the blood, in which case the infection is either direct, produced by phlebitis, which extends up to the cyst, or it may be indirect, in which case the infective elements are carried in the general circulation into the tumor by means of its pedicle; (2) infection may take place by the lymphatics, in which case the lymphatic channels act as the contaminating canals and allow a direct introduction of the germs into the interior of the cyst up its hilum; (3) infection through adhesions which are plentifully supplied in new-formed vessels which are intimately connected with those in the walls of the cysts, and thus allow an easy transportation of the bacteria.

After giving at considerable length the symptoms of ovarian cysts and dwelling upon the diagnosis and differential diagnosis, the author dealt with their operative treatment. Operation for the removal of ovarian cysts which are the seat of septic infection may be divided into four stages: (1) Incision of the abdomen; (2) the breaking up of the adhesions and ligation of blood-vessels which they may contain, and then the pus may be removed by trocar and not with the knife, because if the cyst is incised pus will immediately flow out and the wound will very likely become infected by the septic material. The third step in the operation is the extraction of the cyst through the wound, and in doing this the surgeon should be careful to avoid infecting the abdominal incision at the time he is drawing the pocket through, but this complication may be easily avoided if aseptic gauze sponges are tightly packed around and inside the line of incision. Next comes the ligation of the pedicle and its section, after which it is dropped into the abdomen. The fourth step of the operation consists in the cleansing of the peritoneum, which should be done with great care, especially when the operative field has run any chance of infection. If this has occurred, free irrigation of the peritoneum is proper, but it should be done with care and the liquid employed should be a warm normal salt solution. Care should be taken to limit the irrigation to the subumbilical portion of the peritoneal cavity and a back flow of the liquid toward the diaphragm should be prevented by having the operating-table perfectly flat and the thorax slightly raised.

DR. HENRY HOWITT of Guelph, Ontario, read a paper, entitled

A SECOND CONTRIBUTION TO THE SURGICAL TREATMENT OF INTUSSUSCEPTION IN INFANTS, WITH CASES.

In the paper the term infant was restricted to those under one year of age. After briefly describing the different varieties of intussusception that occur at any period of life, and also referring to particulars in regard to statistics, modes of growth, length of bowel involved, and the severity of the attack in the varieties, he stated that in the infant we have only the acute forms with which to deal in practice, nay, possibly only the ileocolic, which all authorities agree to be the most acute and rapid variety of invagination. It is, he stated, the ileocecal form plus the valve distended and its lumen occluded by the swollen and edematous invaginated portion of ileum which, owing to the tight constriction at the neck by the valve, in a manner resembles a well-hammered boiler-rivet

that no evenly distributed pressure from within can force out.

The author believes that many instances of the trouble occur in infants, leading invariably to death without the true nature of the malady being recognized by the attendant; and that when the facts having reference to this variety of intussusception become generally known, fewer deaths will be recorded of certain bowel affections and more lives saved by surgical means. He has seen seven cases, six of them almost within the past five years, or since his attention was drawn to the subject. Six were in male children; all came from a district the population of which is under 12,000. He has operated successfully on four, all of whom were under six months of age. A fellow practitioner lost one owing to an accident during operation. In one case the friends refused operation and death resulted, and one died shortly after the onset before anything could be done.

The symptoms of iliocolic intussusception were fully dwelt upon. In regard to its diagnosis, the speaker emphasized the importance of the history of the onset, and stated that without it the attendant may be likened to a ship in a storm without helm or compass. In fact, the nature of the onset might suffice to make a diagnosis. The detection of a tumor in the course of the colon left no room for doubt.

The condition of this form of intussusception is such as to preclude the hope of recovery by any method short of operative. No time should be lost in trying either bowel inflation or injection of fluids. They can do no good. His method of operating is as follows: He maintains the temperature of the child by suitable applications to extremities and body during operation. Rigid aseptic preparations and precautions should be carried out. A median, three-inch incision, avoiding the high-placed bladder, is made; the small intestines are eventrated as rapidly as possible, and protected with gauze, which is irrigated with water of suitable temperature. The evisceration allows the obstructed portion of intestine to be brought into view. When, as is generally the case, the invagination has reached the transverse colon, the surgeon cannot bring it out of the wound till the part of the large bowel implicated is disinvaginated. This is accomplished by making pressure on the apex of the intussusceptum while the intussuscipiens is pulled in the opposite direction. It is done by grasping the colon close to the apex with the hand and following it up the bowel step by step till the colon and cecum are free. The mass is now lifted out of the incision. Then comes the most difficult point —the reduction of the invaginated portion of ileum. The part is grasped in the hand and firmly pressed for a few minutes; then pressure is made with the thumbs on the apex, while the fingers surround and support the outer orifice of the ileocecal valve. The method resembles that used in paraphimosis, only the large bowel covers the part from view.

Before returning the intestines to the abdominal cavity the contents of which have accumulated in the ileum above are forced through the affected part into the colon; this proves that the difficulty has been effectually overcome and ensures an early movement of the bowels. Drainage is not necessary. The omentum is spread over the intestines to prevent adhesion of bowel to the line of incision. The dressing is covered with oiled silk, the edges of which are sealed with collodion to prevent urine reaching the cut.

DR. REED said his experience was restricted to a single case of intussusception in infants. The child was operated on in extremis and died within the first five hours following the operation. With early interference the outcome might have been different.

DR. PRICE said the cases reported are a beautiful demonstration of what can be accomplished by good judgment, great diagnostic skill, and early surgical interference.

DR. W. E. B. DAVIS thought it unusual for one man to have so many cases of invagination in infants. He had only met with one case, and this occurred ten days ago, the child, a male, being eight-months old.

DR. HALL recalled half a dozen cases of intestinal obstruction in infants in sixteen years general practice that had died. He believed the invagination is overlooked in the majority of instances.

DR. JOHN M. DUFF believed intussusception in infants occurs more frequently than is generally supposed. He had held *post-mortems* on several cases where the diagnosis was doubtful, but intestinal obstruction was found. He had seen two cases within the past year; in one operation was refused, and the child died. At the autopsy intussusception was found. The other patient was operated on after peritonitis had set in, and death followed.

DR. CUMSTON had seen four cases of invagination in children.

FIRST DAY—EVENING SESSION.

DR. JOSEPH PRICE of Philadelphia, read a paper with the caption

NURSING IN ABDOMINAL SURGERY.

The time had passed when any question was raised by intelligent and experienced members of the profession as to the value of the trained nurse. Nurse-training schools had become important institutions not only to young women who with a creditable ambition entered them to fit themselves for the profession of nurse, but to the physician; for the physician, whether in general or special practice, knew the value of the trained nurse, understood the close and vital relation she held to his patient; how much her care and quick intelligence of needs did to relieve his anxiety and promote the welfare of his patients. The training of these schools should be specially and simply directed to fit pupils for the duties of nurses. These duties in all their details, and all the steps in the training essential to discharge them faithfully and intelligently, should be definitely, orderly, and clearly outlined by teachers of thorough experience. Those desiring to become nurses should commence their work early, while young, studious, and ambitious; while their habits are not so fixed as to make a change difficult, if not impossible. Too much had always been expected of nurses in private nursing. Nursing through twenty-four consecutive hours was too much to require of human endurance

and resulted in neglect of the patient. Systematically trained special nurses were usually bright, cheerful, interested, and spirited; were alive to the importance of their work; cared for and infused into their patient some of their own animation. The untrained nurse, on the other hand, was meddlesome and dangerous. Young, healthy, unmarried women were to be preferred, not widows or grasswidows, great-aunts, or grandmothers.

SECOND DAY—SEPTEMBER 21ST.

MORNING SESSION.

DR. W. J. ASDALE of Pittsburg read a paper in which he reported an interesting case of extra-uterine pregnancy, with mature fetus, and exhibited the specimen. The skeletal remains were borne seventeen years over the completion of gestation term, and the condition was eventually complicated by an ovarian cyst. No operation was performed. The patient died. At the autopsy a monocyst of the right ovary of large size was emptied and withdrawn. One of the long bones of a fetal skeleton was found in the pelvis free; from high in the left hypochondrium underlying the left lower ribs and just beneath the diaphragm the remains were found—skeletal—of a fetal body, disarticulated and closely packed together. The bones were invested by the intestine, a portion of which was cut away in the removal. The fetal soft parts had, at the time of autopsy, almost entirely disappeared. Records of successful operations undertaken for the removal of long-retained fetal remains were so rare as yet to be exceptional, and how much more doubtful surely would be the result of operative interference in such a complicated case as this.

REMARKS ON PRIMITIVE AMENORRHEA, WITH REPORT OF A CASE AND PRESENTATION OF ACCOMPANYING PATHOLOGICAL SPECIMEN.

DR. WALTER B. CHASE of Brooklyn read a paper on this subject in which he said that the essential fact in the sexual life of women was the predominating control of ovarian influence, and the central fact in the pathology of woman's sexual life was due in a large degree to changes or perversion of function or structure of the ovary. While ovarian function was not the single influence which swayed woman's existence, the absence of it would dethrone her womanhood. The commonly accepted theory concerning the functional activity of woman's sexual life was that menstruation marked the commencement of ovulation, and that in its ordinary manifestations they were, in point of time, coincident. The experience of all observers doubtless furnished exceptions to the common law, but these exceptions served rather to confirm than abrogate it. Among these variations or absence of physiological processes, amenorrhea in some of its forms was of common frequency. An intelligent and comprehensive distinction in amenorrhea embraced a difference between those cases which were congenital or acquired. In the former, emansio mensium or primitive amenorrhea, the causes were congenital and chiefly physical, while in the latter, suppressio mensium or acquired amenorrhea, the causes were functional, or largely so. In the first class menstruation has never been present; in the second class the function once present is arrested. Primitive amenorrhea may result from congenital deficiency or imperfect development as follows: absence or imperfect development of ovaries and uterus; degeneration of the ovaries, cystic or otherwise; the formation and development of benign or malignant tumors of the ovaries sufficient to preclude or abolish their function.

REPORT OF CASE.—Mrs. B., aged twenty-four; a woman of refinement and fine physical development; had been married about two years; was sterile, and had never menstruated. She gave an intelligent history of having had all of the symptoms which usually accompany menstruation since the age of puberty, except the appearance of the menstrual flow, commencing at about eighteen years. The symptoms of discomfort developed with perfect regularity every twenty-eight days, with a history of increasing pain and nervous excitability, until during the eighteen months previous to his having seen her the pain had become unbearable and nervous perturbation such that she and her friends feared insanity. The one subjective symptom which gave rise to her fears of mental disturbance was severe headache and pressure felt at the vertex, which was present for several days at each menstrual molimen. During a year or more she had become conscious of a gradual enlargement of the abdomen, and could herself easily define an abdominal tumor. She entered the service of Dr. Chase at the Bushwick Hospital, and a careful study was made of her case by the consulting gynecologist and himself. The patient was desirous of an operation.

Operation was performed. The first tumor removed was a dermoid and had no pedicle, but was closely adherent to the uterus and the right broad ligament. The second tumor was a suppurating multilocular cyst of the left ovary.

The report of the pathologist was: (1) that the dermoid had usurped the place and destroyed the function of the right ovary. (2) In one of the cyst walls of the multilocular ovarian cyst was found a shrunken ovary the size of a large lima bean, and within this ovarian stroma was found a corpus luteum spurium. To the presence of this ovarian stroma was due the womanly development, with ovulation, and the futile effort of menstruation and its consequent suffering. (3) It demonstrates the possibility of ovulation without menstruation. (4) It leaves us in doubt whether the absence of the Fallopian tubes was primary or secondary to the grave disease of the ovaries, with the possibility that they were congenitally absent. (5) It presents the rare and exceptional condition of a perfectly developed woman who had an ovary and uterus, who ovulated, was sterile, and never menstruated, and yet was ruined in health by Nature's effort to establish an impossible normal function.

The remainder of the session was devoted to the presentation and discussion of pathological specimens. Specimens were exhibited by Drs. John B. Deaver, X. O. Werder, Rufus B. Hall, and Wm. H. Humiston.

AFTERNOON SESSION.

PRESIDENT'S ADDRESS.

This was delivered by DR. CHARLES A. L. REED of

Cincinnati, Ohio. He selected for his subject

THE EVOLUTION OF SPECIALISM.

He said that modern specialism in medicine dates from the period when the French schools, in the early decades of this century, took up seriously the question of pathological anatomy. This was the physical basis upon which the work of division began. The obstetrical art was as old as the function of reproduction, although the latter ages had witnessed its present refinements. It had been said that obstetrics married surgery, and that the fruit of the union was bright-eyed gynecology. The accouchement probably occurred at the time Recamier invented the speculum in 1801. While surgery had its first rational development in the United States in 1809 under the masterly hand of the immortal McDowell, everything from that day to this was essentially contemporaneous history, in which occurred conspicuously many of the proudest American names. Specialism became a verity in response to natural laws, which even to-day determined its destiny. There was not a day but that the general medical profession became enriched in resource and potentiality by the accretions derived from specialism. Each specialty, however assiduously cultivated, remained an integral part of the great general profession, the masters of which must ever stand as our ideals. All specialists to-day were primarily the products of general medical culture.

THIRD DAY—SEPTEMBER 22ND.

MORNING SESSION.

DR. D. TOD GILLIAM of Columbus, Ohio, read a paper on the

TREATMENT OF GRANULAR EROSIONS OF THE CERVIX,

and reported three cases which he had treated successfully by ligation of the cervical vessels.

DR. B. SHERWOOD DUNN of Boston followed with a contribution on

THE RELATION OF NERVOUS AFFECTIONS TO DISEASES OF THE FEMALE PELVIC ORGANS.

He limited his remarks to the great neuroses of neurasthenia, hysteria, and insanity. He was totally opposed to any operative procedure, except where pathological conditions were demonstrable. He had no confidence in operations upon healthy organs for the cure of any neurotic condition, and believed that such were now generally condemned by the profession. He, however, looks upon the position taken by some neurologists, that there is no relation of cause and effect between the various neuroses and psychoses and disease of the female pelvic organs as being as extreme and condemnatory as the advocacy of the removal of normal organs in the female pelvis for the cure of nervous diseases, by some ill-advised persons calling themselves gynecologists. In operating upon diseased conditions in the peivis, the gynecologist did not expect to remove the symptoms of the neuroses, but only those symptoms properly belonging to the pelvic disease itself. But strange and disappointing as it might seem to be to some of the critics, when those pathological pelvic conditions were removed or corrected, the nervous system relieved from the source of unceasing irritation, gradually returned to its normal poise, and the patient was cured of her neuroses as well as her pelvic disease.

DR. WM. H. HUMISTON of Cleveland, Ohio, read a paper on the

GRAVER FORMS OF NERVOUS DISTURBANCES DUE TO ORGANIC CHANGES IN THE GENITAL ORGANS.

In the last five years of his work the essayist had never operated upon a case in which the corelation between the diseased pelvic organs and the nervous symptoms were not clearly defined before an opinion from a neurologist relieved him of a doubt of a nerve or brain lesion, with one exception. He reported six cases in which great relief, in some cures, followed operative interference. The first case was one of insanity; the second, melancholia; the third, neurasthenia; the fourth, insanity; fifth, hystero-epilepsy, and the sixth, hysteria. The cases were reported with the hope that some effort would be made to secure for women confined in county and State institutions for the insane such surgical measures which would, in a large proportion of cases, be a curative means for their mental ailment, and which must, in a vastly greater proportion at least, improve their condition, both mentally and physically.

DR. RUFUS B. HALL of Cincinnati read a paper on

ALBUMINURIA COMPLICATING GYNECOLOGICAL OPERATIONS.

He referred first to the conditions predisposing to this complication. He urged careful examination of the urine preceding operation so as to determine, if possible, the presence of nephritis or other causes leading to suppression. The most common cause is a preexisting nephritis but unfortunately in granular nephritis, a most careful examination of the urine may fail to show the presence of the disease. One of these patients after the operation may have suppression followed by coma and death. He said there might also be suppression following operation in a patient with a fatty heart or with atheromatous arteries. It is of the greatest importance to have the patient thoroughly prepared for operation. If there is the least indication of preexisting nephritis, he advises chloroform as an anesthetic, regardless of the age of the patient. In his early operative work he used ether almost exclusively. He cited 110 sections in which ether was given.

In 33 cases there was a trace of albumin in the urine during the first 24 hours. In 10 cases there was partial or complete suppression and 2 of the patients died in coma. During the time he used ether, he operated on 7 patients known to have nephritis. They were given chloroform. These cases are included in 500 sections in which that drug was the anesthetic used. Eighty-five of this number showed a trace of albumin in the urine during the first 24 hours after the operation. Ten patients had suppression and 4 died of uremic coma. All the patients who were known to have kidney disease were given chloroform. There were thirty-five of these, and the deaths in the chloroform list were from this number. To avoid the dangers from the use of chloroform, he urged that its administration

be only entrusted to an expert in its use. He closed his paper with a résumé of the preliminary treatment he accords every patient about to be subjected to a section; of the manner in which he conducts his operations, and of the measures he employs if albuminuria occurs following operation.

AFTERNOON SESSION.

DR. X. O. WERDER of Pittsburg gave the clinical observations of more than 100 abdominal sections for ovarian tumors.

DR. FREDERICK BLUME of Allegheny, Pa., reported a case of double uterus and vagina with pregnancy in one horn, in which he excised the vaginal septum.

The election of officers for the ensuing year resulted as follows: President, Dr. Edward J. Ill of Newark, N. J.; first vice-president, Dr. Edwin Ricketts of Cincinnati; second vice-president, Dr. A. B. Miller of Syracuse, N. Y.; secretary, Dr. Wm. Warren Potter of Buffalo, re-elected; treasurer, Dr. X. O. Werder of Pittsburg, re-elected. Executive Council: Drs. A. Vander Veer, L. S. McMurtry, W. E. B. Davis, John M. Duff, L. H. Dunning, and Walter B. Chase. Indianapolis, Indiana, was selected as the place for holding the next meeting, the time of which was left to the Executive Council.

REVIEWS.

A TEXT-BOOK ON SURGERY. By JOHN A. WYETH, M.D., Professor of Surgery in the New York Polyclinic Medical School and Hospital. Third edition. New York: D. Appleton & Company, 1898.

THE practical character of this text-book is the feature that has commended it to the favorable consideration of the profession. This third edition has enabled the author to bring the work up to date while retaining its practical character. Many of the chapters have been re-written and enlarged so that the work exceeds the former edition by 112 pages. Throughout all the editions the author has shown his loyalty to American surgery, and due credit has been given to Americans for their contributions to the science and to the advances which have been made in surgical work. As has been stated, the work is severely practical and mirrors the methods and treatment of the author; the etiology and pathology of disease are presented only in their most general aspects. The illustrations are very abundant, and for the most part are clear and instructive. Chapters XIV. and XV. on Aneurisms and Ligation of Arteries are especially clear—perhaps the best in the book. The author's operations for bloodless amputation at the hip- and shoulder-joints are clearly and elaborately described, and amply illustrated.

In spite of the general excellence of the work there are a few points in which the author has laid himself open to criticism. The differences between asepsis and antisepsis are not clearly defined although the general impression is that the author leans to antisepsis. The classification of pus into "surgical" and "laboratory" pus is most crude. It has always been held, and correctly so, that the margin of erysipelas is very abrupt and not as herein stated, as fading gradually into the surrounding healthy skin. What the author intends to convey by the term "aseptic poultice," as recommended in the treatment of lymphangitis is rather obscure, and the statement that tubercular adenitis is a form of lymphangitis is open to question. Priority for the method of tendoplasty for paralysis belongs to Nicolodain (1882), and not to Dr. Parrish (1892). We have always been taught that the cells lining the interior of the hydrocele sac are endothelial not epithelial as mentioned on page 836.

Numerous inaccuracies of like nature are noticeable throughout the work. The general appearance of the book is attractive and the publishers have done their part well.

TROPICAL DISEASES; A MANUAL OF THE DISEASES OF WARM CLIMATES. By PATRICK MANSON, M.D., LL.D. (Aberd.). New York: William Wood & Company, 1898.

THE author's wide experience in this department of medicine has enabled him to talk authoritatively on the subjects which are contained in this book. After an introduction dealing with the etiology and methods of propagation of the various tropical diseases, he begins the section on fevers with a consideration of the subject of malaria. Dr. Manson is well known by his writings on this subject and in this work he refers at length to his theory of the introduction of the plasmodium into the human system. Inasmuch as he claims no more than a logical conclusion from definite data, and since recently Koch of Berlin has come to the same conclusion in reference to the mosquito being the factor of the propagation of the malarial parasite, we are inclined to believe that his theory is strongly substantiated. He lucidly shows how the malarial parasite may leave the human body affording an opportunity for its extracorporeal existence; he describes its extracorporeal history and how it enters the human body. The author is extremely modest and honest in stating his deductions as to the mosquito hypothesis, as is demonstrated by his own words: "I do not maintain that this mosquito hypothesis has as yet been thoroughly proved, but I do maintain that it is so probable, and of a character so important, from both both a scientific and practical point of view, that every effort should be made to establish or confute it."

The article on malaria is one of the best in the book and contains a vast amount of information.

Section II. deals with general diseases of undetermined nature, such as beriberi, epidemic dropsy, and negro lethargy or sleeping sickness.

Section III. is devoted to the abdominal diseases, cholera, dysentery, abscess of the liver, and some of the diseases common to specific districts in the tropics, such as infantile biliary cirrhosis, occurring chiefly in Calcutta and affecting rather Hindu than Mohammedan children, and "ponos," an analogous disease endemic in the islands of Spezzia, Ilydra, and others in the Grecian Archipelago.

The fourth section is given to the description of "infective granulomatous diseases," such as leprosy, yaws, etc.

Section V. is one of the most important in the book and deals with "the animal parasites and associated diseases." The author considers in detail the diseases produced by the parasites which are chiefly confined to the circulation and to the lymphatics, these parasites being chiefly the varieties of filaria and the *hematobia bilharzia*. He considers all the affections produced by the *filaria nocturna* such as elephantoid fever, lymph scrotum, chyluria, filarial orchitis, elephantiasis, and chylous dropsy of the tunica vaginalis and peritoneum. Endemic hematuria is considered in the article devoted to the consideration of the *hematobia bilharzia*.

The parasites confined to the connective tissue of the body and the affections produced by their presence there are next described in the chapter devoted to the guinea-worm (*filaria medinensis*). Next we find a consideration of endemic hemoptysis, due to the *parasite distoneum Ringeri*, which is confined to the lungs. The parasites of the liver and intestines are likewise considered.

The last two chapters are devoted to a description of the various skin diseases found in the tropics, some of which, such as Madura foot and dhobic itch, are caused by vegetable parasites, and to local diseases of uncertain nature.

The book contains, as will be seen from the above résumé, a large amount of matter. It is surprising that the author was able to condense all this matter in so compact a space without a sacrifice of clearness and accuracy of description. The book does not claim to be a complete treatise on tropical diseases but simply an introduction to this important department of medical science. As such it more than fulfils the requirements, and will serve the student as an accurate guide.

ATLAS OF LEGAL MEDICINE. By DR. E. VON HOFMANN, Professor of Legal Medicine and Director of the Medico-Legal Institute at Vienna. Authorized Translation from the German. Edited by FREDERICK PETERSON, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York. Assisted by ALOYSIUS O. J. KELLY, M.D., Instructor in Physical Diagnosis, University of Pennsylvania; Adjunct Professor of Pathology, Philadelphia Polyclinic. Philadelphia: W. B. Saunders, 1898.

THE publishers are to be congratulated in again putting before us one of Lehmann's superb atlases, and it is not at all surprising that these works have appeared in nine different languages, for until now the means of producing illustrations in colors or otherwise faithfully to represent normal or diseased conditions have not been entirely successful. A cursory glance at the Lehmann books is at once convincing that a new era has begun in this line.

The work before us comprises a large number of full-page plates, many of them in colors, and numerous smaller illustrations, representing common and rare conditions of pathologic and medico-legal interest. The text supplies simply a brief history of each case and the necessary data bearing upon the subject, the deductions in each case of suicidal or homicidal death being characteristic of the immense experience and logical mind of the late author.

The work is not only valuable to the expert in forensic medicine and the clinician but is indispensable to every worker in the autopsy-room and the pathologic laboratory. The editors have closely followed the original text and have done their part in an admirable manner. The book is published in the same convenient and handy size as the original and we can heartily recommend it and trust that it may reach the eyes of all interested in the subject.

THERAPEUTIC HINTS.

For Severe After-Pains.—

℞ Antipyrin . . . . . gr. iiss
Quininæ sulphat. . . . . gr. iii.

M. Ft. chart., No. I. Sig. One such powder every three hours while pains remain severe. If the condition of the patient should contraindicate antipyrin, the following powder may be substituted:

℞ Pulvis opii } aa . . . . . gr. ½.
Camphoræ }

M. Ft. chart., No. I. Sig. One powder every hour until relief is obtained.

Sedative Mixture in the Treatment of Uterine Fibroids.—

℞ Sodii bromidi }
Ammonii bromidi } aa . . gr. lxxx
Strontii bromidi }
Aq. dest. . . . . ℥ viii.

M. Sig. Two to three tablespoonfuls daily.

For Intermittent Fever when it does not yield to treatment by quinin alone, BACELLI recommends the following combination with arsenic and iron:

℞ Quininæ sulphat. . . . . ʒ i
Ferri et potassii tartrat. . . . ʒ iiss
Acidi arseniosi . . . . gr. 1⅔
Aq. dest. . . . . ℥ x.

M. Sig. On the day following the fever, one tablespoonful every hour; on the next day every three hours, and so on in this manner.

Powder for a Suppurating Surface.—

℞ Iodoformi }
Salol }
Bismuthi subnitrat. } aa . . . ʒ ii.
Pulv. carbonis }
Pulv. cinchonæ }
Pulv. benzoini }

M. Sig. For external application.

For Sick Headache.—

℞ Ol. caryophylli . . . . *m.* xl
Ol. cajaputi . . . . *m.* lxxx
Sodii bicarb. . . . . gr. lxxx
Chloroformi . . . . gtt. lxxx
Tinct. cardamomi comp. . q. s. ad. ℥ ii.

M. Sig. One teaspoonful three times a day.